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Maintenance Resource Prediction Model Summary System (MRPMSS) User's Manual

by
Edgar S. Neely

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This manual gives step-by-step instructions for the installation and use of the Maintenance Resource Prediction Model Summary System (MRPMSS). MRPMs are a set of models that run on various computer systems to assist in planning and programming maintenance resources, based on the anticipated requirements of actual installation facilities, for prediction periods of 1 to 10 years.

MRPM systems contain two sets of modeling methods: Appropriation/Current Use Summary Models and Facility Component Models. There are two types of MRPM computer hardware systems: Personal Computer (PC) systems and Headquarters - Integrated Facilities Systems (HQ-IFS).

This manual covers the use of the Appropriation/Current Use Summary Models for use with PC systems, and is designed to be used with the MRPMSS screens.

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FOREWORD

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1. INTRODUCTION.

1.1 Hardware and Software Requirements. The Maintenance Resource Prediction Model Summary System (MRPMSS) requires the following hardware:

1. IBM-PC/AT (or equivalent) with 640K RAM
2. Enhanced Color Graphics (if graphic display is required)
3. 10 MB Hard Disk Drive (for calculating only one organization)
4. Printer (132 character).

Software packages used by MRPMSS include:

1. Microsoft Chart - if graphics is required
2. DOS 3.0 for single organization, DOS 3.3 for a MACOM.

1.2 Basic Operation Description. The Maintenance Resource Prediction Model (MRPM) system is a set of models which run on various computer hardware systems to assist in planning and programming maintenance resources based on the anticipated requirements of the actual facilities at an installation.

The MRPM system is a multiyear cost estimating system for estimating maintenance resources for prediction periods which range between 1 and 10 years.

The MRPM system contains two sets of different modeling methods: Appropriation/Current Use Summary Models and Facility Component Models. Only Appropriation/Current Use Summary Models are covered in this manual.

1.2.1. Appropriation/Current Use Summary Models. The summary models require only three inputs to provide a maintenance prediction: the current use category code (known as the Army Facility classes and construction categories, F4C, or category codes); the year of construction; and the gross floor area for buildings or the secondary unit of measure for nonbuildings. Optional appropriation codes can be used to identify facilities funded under each appropriation in the organization. Table 1.1 contains the descriptions and codes used to identify the Army's appropriation codes. The output is a prediction based on a set of average resources by facility age for each current use code for buildings. All four input items can be automatically downloaded from your corporate data base (such as IFS) through conversion programs; therefore, no data entry by your personnel is required.

Facilities can be modeled as a group or individually as described below.

1. Facility Summary by Construction Year. All building facilities for one current use code, constructed during the same year for one appropriation code, can be combined into one facility group, for example, all permanent post headquarters buildings (current use code = 61011) constructed in 1964 for the Army operations and maintenance appropriation (OMA = A). The facility ID uses a century code of C for 1900s. The facility ID would be a combination of the appropriation code, current use code, and the

Table 1.1
Army Appropriation Codes

Appropriation Title	Appropriation Code	Facility Type	Facility Identification
Operations Maintenance, Army	OMA	Permanent	A
		Temporary	B
Operations Maintenance, Army Reserve	OMAR	Permanent	C
		Temporary	D
Army Industrial Fund	AIF	Permanent	E
		Temporary	F
Research, Development, Test and Evaluation	RDTE	Permanent	G
		Temporary	H
Other Procurement, Army	OPA	Permanent	I
		Temporary	J
Army Family Housing	AFH	Permanent	K
		Temporary	L
Operations Maintenance, National Guard	OMNG	Permanent	M
		Temporary	N
Other*	OTHER	Permanent	O
		Temporary	P
All			Z

* Military Construction, Army (MCA), Military Construction, Army Research (MCAR), Military Personnel, Army (MPA), Non-Appropriated Fund (NAF), National Guard Personnel, Army (NGPA), Operations Maintenance, Air Force (OMAF), Operations Maintenance, Navy (COMN), Real Property, Army (RPA), ZZZZ (Temporary ID).

construction year (A61011 C64). The floor area for all such facilities would be added together and listed as the floor area for the Facility ID. All nonbuilding facilities for one current use F4C constructed in a year can be combined into one facility group. For example, all flag poles (F4C = 69010) on post. The facility ID would be a combination of the current use F4C and "*****" (A69010 ***). The unit of measure (count) for all such facilities would be added together and listed as the count for the Facility ID.

2. Facility Summary by Individual Facilities. Each individual facility can be modeled separately by Facility ID (P12345ABC).

Resource totals by either facility group or individual facility modeling methods are identical. The same calculation methods are applied to produce resource requirements.

a. **Nonbuilding Facility Calculations:** For nonbuilding facility calculations, the system uses average historic data expressed in dollars per unit of measure, called recurring maintenance factor (RMF). For the Army, RMFs were calculated from a 5-year average of Technical Data Report costs and quantities as published in the Annual Summary of Operations (Red Book). The cost data were adjusted to include inflation. RMFs are given in dollars per unit of measure, i.e., \$/1000 sq ft. RMFs are given in the units of measure recorded in the Red Book. For example dollars/sq yd for roads.

b. **Building Facility Calculations:** For building facility calculations, the system uses average resource requirements by age of building by current use code. The resource requirements used are dollars/sq ft, labor hours/sq ft, equipment hours/sq ft, and material dollars/sq ft. Material costs are based on costs for Washington, DC. Labor hours are multiplied by the installation's shop effective rate, equipment hours by the installation's maintenance equipment charge rate, and material dollars by the installation's location adjustment factor to produce installation cost predictions.

The average resource requirements were developed by:

1. Performing a component/materials quantity takeoff for buildings at 10 installations.
2. Using the MRPM Component Facility Model to determine resources by the age of each facility, for example, total costs, labor hours, material dollars, and equipment hours for the facility when it was 1 year old, 2 years old (up to 80 years old).
3. Grouping the buildings by current use code and calculating an average cost, labor, material, and equipment resource per sq ft for each of the facility ages 1 through 80.

The averages can then be used to predict resource requirements when the only data available is the current use code, construction year, and floor area.

1.2.2. Facility Component Models. This set of models is not available in this system. This set of models allows you to provide a facility bill of materials or material quantity takeoff, and to calculate resources by each task (replace floor) that should be performed for a component (hardwood floor). For more information on this set of models, call Skip Neely, USACERL, 800-USA-CERL.

1.3 System Organization. There are two types of MRPM computer hardware systems.

1.3.1 Personal Computer (PC) System. This system is designed for use by installations, Major Commands (MACOM), and Department of the Army (DA). Data can be transferred from one organization to the next higher organization in the chain of command.

1.3.2 Headquarters - Integrated Facilities Systems (HQ-IFS). This system is designed for use by DA to perform DA, MACOM, and installation level predictions using the Summary Models. It would be replaced if the MACOMs and installations implement the PC system.

1.4 User Manual Organization. This user's manual covers the Summary Models on the PC system only and is designed to be used with the MRPMSS screens, to complement the information on the screen.

1.5 How to Learn the System. Finish reading Chapter 1. Then start the learning process by turning to Chapter 3, "Learning the MRPMSS System." Work your way through Chapter 3 by alternating Chapter 3 sections with corresponding paragraphs in Chapter 2. Then perform the learn exercise on the computer.

1.6.1 Standard Screen Display.

Figure 1.6.1-1 Standard menu screen display.

1-4

```

#####
General Facility Information                                12-18-89
#####
Seq [0001] Command Mode
(1) Subinstallation [01] SUMMARY
(2) Area [01] Summary Data
(3) Facility ID[A61012C60] [
(4) F4C Code [6101200] [DIVISION HEADQUARTERS BUILDING ]
(5) Number in F/G [ 1]
(6) Travel Zone [ 3]
(7) Square Feet [ 34497]
(8) Construction Year[1960]
(9) W/P Method Index [1] minor-inhouse,major-contract
(10) Special Cond. Mult.ID[01]Normal Conditions
(11) Scheduled disposal date [ ] -dd-yy]
(12) Last Changed Date [12-18-89] -dd-yy]
(13) Last Calculation Date [12-18-89] um-dd-yy]
(14) Facility Funding Profile[01] test
(15) Calculation Modeling Id [1] (1:4) As Entered
(16) Facility Property (Permanent/Temporary (P/T) [ ]
#####
F1 TOP F2 BOT F3 FIND F4 LIST F5 EDIT F6 MASK F7 ADD F8 DEL F9UPDATEF10EXIT

```

Figure 1.6.1-2 Standard screen display.

Each screen is divided into three sections. The top section displays titles or headings that indicate your current location in the MRPM system. The bottom section is the last line on the screen and displays the function keys that are currently active for your use. The middle portion of the screen displays the information that can be changed at the terminal.

1.6.2 Standard Keys.

<u>Key Name</u>	<u>Action</u>
1. Page Up	Move to the previous record or screen of records displayed.
2. Page Down	Move to the next record or screen of records displayed.
3. Arrow Keys (↓↑)	Move to the next field or move to the next character in a field being edited.
4. F1 (TOP)	Display the first record or screen of records.
5. F2 (BOT)	Display the last record or screen of records.
6. F3 (FIND)	Locate a known item within a table. The system will highlight the area where you are to type the item to be located. After typing the item to be located, press the ENTER key to perform the location. Special functions require the F3 FIND key to be entered.
7. F4 (LIST)	Print the complete table on your printer.

- | | |
|---------------------------|---|
| 8. F5 (EDIT) | Edit the information within the record(s) displayed on the screen. |
| 9. F6 (SELECT) | Choose a table for review or editing. |
| 10. F7 (ADD) | Add a new entry into the table. |
| 11. F8 (DEL) | Remove an existing entry from the table. |
| 12. F9 (SAVE) | Save the changes and leave the edit or add function. |
| 13. F10 (EXIT) | Do <u>not</u> save the changes, leave the edit (or add function) and return to the previous screen. |
| 14. Selection Key (Enter) | Use the cursor to choose any menu item to be selected and press the ENTER key. |
| 15. Stop Printing | (Press Control and C at the same time). |
| 16. (Print Screen) | Print the current contents of the screen on your printer. |

1.7 Loading the System Into Your Computer. The first diskette in your package contains a SETUP program. This SETUP program will execute all steps shown in the sections below. Place this diskette in your a: drive and type a:setup (enter). The program will prompt you for input.

1.7.1 Required Directories. All programs have been set to work from one single drive such as the C: drive. If you are using a different disk, programs AUTOEXEC, INSTMESS, and LEARN will need to be changed. Please call Skip Neely, USA-CERL, 800-USA-CERL or (217) 373-6721 for program changes. This report will always use C: as the disk in all commands.

The following directories are required:

- | | |
|---------------------|-------------------|
| 1. C:\MPM | 3000K bytes |
| 2. C:\MPMV2\MPM | 120K bytes |
| 3. C:\DATA\Y1 | 1300K bytes |
| 4. C:\DATA\LEARNING | 150K bytes |
| 5. C:\DATA\LEARN | 300K bytes |
| 6. C:\BASEINST | <u>300K bytes</u> |

Total	5MB
-------	-----

Create the directories as follows from the C:\prompt:

1. Type: MD \MPM
2. (Enter)
3. Type: MD \MPMV2
4. (Enter)
5. Type: MD \MPMV2\MPM
6. (Enter)

7. Type: MD \DATA
8. (Enter)
9. Type: MD \DATA\Y1
10. (Enter)
11. Type: MD \DATA\LEARNBAS
12. (Enter)
13. Type: MD \DATA\LEARN
14. (Enter)
15. Type: MD \BASEINST
16. (ENTER)

1.7.2 Load C:\MPM. Starting from the C:\ prompt:

1. Type: CD \MPM
2. (Enter) (Insert first diskette marked c:\mpm in drive A:)
3. Type: COPY A: *.*
4. (Enter)
5. Press F3 to display "COPY A: *.*" and (Enter) for each diskette.

1.7.3 Load C:\MPMV2\MPM. From the C:\ prompt:

1. Type: CD \MPMV2\MPM
2. (Enter) (Insert first diskette marked C:\MPMV2\MPM in drive A:)
3. Type: COPY A: *.*
4. (Enter)
5. Press F3 to display "COPY A: *.*" and (enter) for each diskette.

1.7.4 Load C:\DATA\Y1. From the C:\ prompt:

1. Type: CD \DATA\Y1
2. (Enter)
3. Type: COPY A: *.* (Insert diskette marked c:\DATA\Y1)
4. (Enter)
5. Press the F3 key (Insert disk)
6. (Enter)

1.7.5 Load C:\BASEINST. From the C:\ prompt:

1. Type: CD\BASEINST
2. (Enter) (Insert diskette marked BASEINST)
3. Type: COPY A: *.*

1.7.6 Load C:\DATA\LEARNBAS. At the C:\ prompt:

1. Type: CD\DATA\LEARNBAS
2. (Enter) (Insert diskette marked DATA/LEARNBAS)
3. Type: Copy A: *.*
4. (Enter)

1.7.7 Check CONFIG.SYS File. Make sure your CONFIG.SYS file has at least (minimum) the following sizes:

1. Files = 30
2. Buffers = 20
3. Break = ON
4. Device = C:\DOS\ANSI.SYS

1.7.8 Setting Up MRPM for Your PC Configuration. Once all diskettes have been loaded into the computer, the following programs located in the \MPM directory must be reviewed for accuracy:

1. AUTOEXEC.BAT
2. INSTUSER.BAT

These programs have been created for use entirely in C, D, or E drives and stored under the suffix .?DR, where ? represents the correct drive that you are using to store your \MPM programs and \DATA directories.

The first step is to set up the basic programs correctly.

Type: CD\MPM and (Enter)

From \MPM prompt type:

Copy *.?DR *.BAT

For example, using the "C" drive:

Copy *.CDR *.BAT

1. AUTOEXEC.BAT. You may set up your current AUTOEXEC.BAT and menu system to allow selection of MRPM as an option, or you may copy the AUTOEXEC.BAT to your C:\ directory so that the system will automatically login to the MRPM selection menu. Your menu file must execute the \MPM\AUTOEXEC.BAT program. Your menu must also contain an EXIT MRPM selection that will execute your C:\AUTOEXEC.BAT program to reset your old configuration.

From the C:\MPM prompt type:

Copy AUTOEXEC.BAT C\

Type: TYPE AUTOEXEC.BAT (Enter)

Check the paths:

1. DOS should be located in your C\ drive in some directory. If not named \DOS you must change the AUTOEXEC.
2. All other directories are MPM-related.

Press (Control) (Alt) (Delete) to restart the system with the new autoexec.bat files.

1.8 Initial Setup for a Reporting Organization.

STANDARD MRPM ARMY ORGANIZATION CHART BY ORGANIZATION CODES

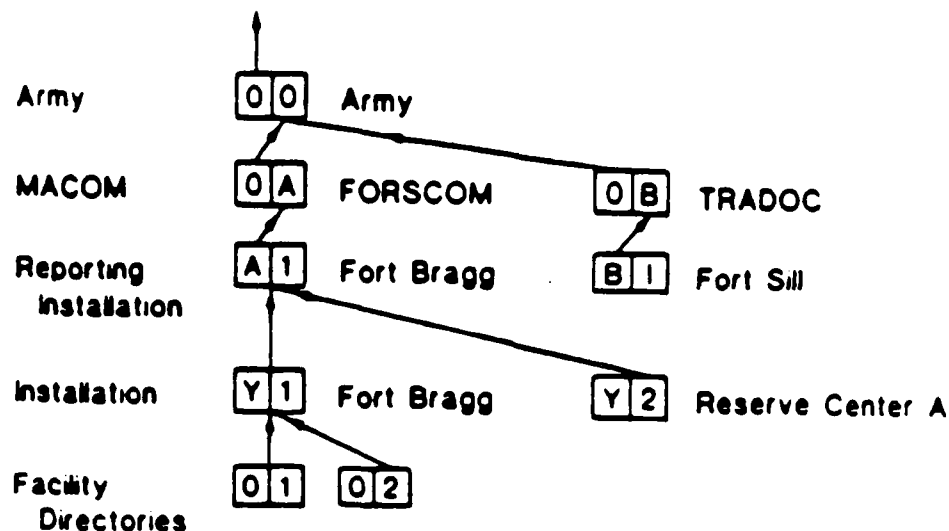


Figure 1.8-1 Standard MRPM Army organization chart.

A reporting installation is defined as the organization that prepares and submits a Technical Data Report to a Major Command. Reporting installations (A1 Bragg) are currently listed in the MRPM Organization Chart under each Major Command (0A FORSCOM).

All organization codes are established as follows: (1) The first character identifies the next higher organization (i.e., Major Command for installations), (2) The second character identifies the individual reporting organizations under the next higher organization (i.e., each installation for one Major Command).

The reporting installations (for example, Fort Bragg) should be given the organization codes Y2 through 9, A through Z).

```

#####
Maintenance Prediction Model
Installation Selection Menu
#####
Installation name      Batch contents
#####
DOS                  CD \
Enter Current Learn DataBase
Create a New Learn DataBase
Training & Doctrine Command
Fort Leonard Wood, Missouri
#####
Page 1
F1      F2      F3SETUP F4      F5 EDIT F6      F7      F8      F9      F10EXIT#

```

Figure 1.8-2 Installation selection menu.

When you enter the MRPM AUTOEXEC program for the first time, the installation selection menu displays five choices: (1) DOS: This selection will place you into the C: drive where you can perform any DOS command; (2) Enter Current Learn Data Base: This selection will place you into the C:\Data\Learn directory. You can then type MRPMSS to start the system; (3) Create a new Learn Data Base: This selection will create a fresh copy of C:\Data\Learnbas in the C:\Data\Learn directory. You can then type MRPMSS to start the system; (4) The fourth entry shows an example of a major command. Move the arrow pointer to this row and you will see the current organization code shown in the organization chart in the learn system (OB); (5) The fifth entry shows an example of an installation. Move the arrow pointer to this row and you will see the correct organization code shown in the organization chart in the learn system (BJ).

After you have read chapter 3 and performed the learn exercise, print the organization chart and set up your major command and all installations by using F3 SETUP as shown in the commands below:

```

#####
|
|  SETUP NEW INSTALLATION
|
|  1)  ENTER NEW INSTALLATION NAME:
|      FORT LEONARD WOOD
|  2)  ENTER DIRECTORY NAME: c:\DATA\BJ
|      ex: A1, A2, or B2 ...
|  3)  ENTER STARTING SUBDIRECTORY: c:\00
|      ENTER ENDING SUBDIRECTORY: c:\00
|
|
#####

```

F1 F2 F3 F4 F5 F6BEGIN F7 F8 F9 SAVE F10EXIT

Figure 1.8-3 Setup new installation screen.

From the Maintenance Prediction Model Installation Selection Menu make the following entries:

1. (F3 - SETUP)
2. Type Installation or MACOM Name: Fort Leonard Wood
3. (Enter)
4. Type the drive to contain the data: D (current drive shown)
5. (Enter)
6. Type the organization code: BJ
7. (Enter)
8. (Enter) (No subdirectories)
9. (Enter)
10. (F6 - BEGIN)

You are now ready to enter the MRPMSS system. Highlight the desired MACOM or installation and press the ENTER key. The system will automatically transfer you to the correct directory.

At this point, you can copy your ASCII file of corporate data (IFS) into the current directory before starting the MRPMSS system.

Now type MRPMSS and press the ENTER key.

1.9 Loading Installation Data Tables. The following paragraphs will describe the work required to set up your installations' database. Perform these activities after you have learned the system.

1.9.1 Basic Information.

1.9.1.1 General Information. Two tables need to be updated.

1. Organization Chart. All major reporting installations are responsible for the management and reporting of several smaller installations. When you first load the system, you will need to enter each of the smaller installations and the facility directories under each installation. Always use "Y" as the first character of the ORG CODE and the numbers 0 through 9, then letters A through Z as the second character. Always use your reporting installation's ORG CODE as the MACOM ID # (Parent organization) for the smaller installation and the installation's ORG CODE as the MACOM ID # (parent organization) for each facility directory.

An example for one installation setup is shown in the table in ORG # 149 through 167. Delete this example before entering your actual data.

2. Report Periods. Enter the beginning and ending report year. Look up your installation's material adjustment factor in Table 4.1 and press Enter. Look up your organization's ID in Table 4.2 and press Enter. The number of lines per page can be calculated by multiplying the length of the paper (11 inches) by the number of printed lines per inch (6 lines per inch) to obtain the number to be entered (66). If you have a virtual drive of 2 to 3 MB or larger, enter the drive letter; otherwise, leave blank.

1.9.1.2 Facility Resource Data. One table must be updated:

1. Trade and Costs Data. Obtain the shop effective rates from your IFS system and enter as inhouse labor rates. Obtain an estimate of the contractor's equivalent shop rates from your estimating section. If costs for purchase, maintenance, and operations of equipment are normally charged directly to every project, enter the average cost for the typical shop maintenance truck. Do not include the parts of the equipment costs, such as purchase, that are not charged to the project but are paid from an entirely different account. Obtain the cost for the contractor's equipment from your estimating section.

1. General Information - Tables dealing with Organization Charts, Recurring Maintenance Factors (RMFs), F4C to AMS conversion tables, and reporting periods.

2. Facility Resource Description Data - Tables that define your labor and equipment costs and the Army-wide average resource information.

```

=====
GENERAL INFORMATION
SELECT!ON MENU
=====

ORGANIZATION CHART
RMF FACTORS
F4C CONVERSION CODES
REPORT PERIODS
UNIT COST FACTORS
AMS DESCRIPTION EDITOR
AREA IDENTIFICATION
SUBINSTALLATION IDENTIFICATION
LAN UNIT COST GRAPH

C:\DATA\LEARN
=====
F1      F2      F3      F4      F5      F6      F7      F8      F9      F10EXIT

```

Figure 2.2.1-1 General information selection menu.

2.2.1.1 Organization Chart. This table contains a listing of all major reporting organizations in the Army.

```

      ORGANIZATIONAL CHART                                     PAGE 1
=====
  ORG  ORG  INST  ORGANIZATION  *MACOM *RELATION  SUB
  #    CODE  ID    DESCRIPTION  ID#    CODE    CODE
=====
  001  00    *ARMY                XX
  002  0A    *FORSCOM                00
  003  A1    *FT.BRAGG                0A
  004  A2    *FT.CAMPBELL            0A
  005  A3    *FT.CARSON              0A
  006  A4    *FT.DEVENS              0A
  007  A5    *FT.DRUM                0A
  008  A6    *FT.WOOD                0A
  009  A7    *FT.INDIANTOWN GAP      0A
  010  A8    *FT.SAM HOUSTON        0A
  011  A9    *FT.LAWTON              0A
  012  A0    *FT.LEWIS              0A
  013  AA    *FT.MCCOY              0A
  014  AB    *FT.MCPHERSON          0A
  015  AC    *FT.WEADE              0A
=====

```

Figure 2.2.1.1-1 Organization chart.

Each organization in the Army has been assigned a unique two-character MRPM organization code listed in the second column of this table (ORG CODE). This code is used to identify the owner organization of MRPM files and is a part of the naming convention of all appropriation - AMS resource summary files. The code for your organization should be entered in the report dates file when you first install the MRPM system. All codes are listed in Table 4.2 - Organization Codes and Organization Description for Personal Computer Files. The installation ID and relation code are not used at present, but can be copied directly from the IFS database if required at a later date. The ORG# in column one is used only to keep track of where the data for an organization is stored in the table.

2.2.1.2 RMF Factors. USED IN THE CURRENT SYSTEM) - This table has been developed by HQUSACE and contains a list of the installation's Recurring Maintenance Factors (RMF) by AMS codes. The RMF factors have been calculated by averaging the past 5 years' data as reported in the Technical Data Report.

```

=====
RMF FACTORS
=====
STARTING AMS CODE : K2600
ENDING AMS CODE : K2600
DEFAULT RMF FACTOR : .00

YEAR      RMF FACTOR
1          2.55
2          2.55
3          2.55
4          2.55
5          2.55
6          2.55
CUR DN    7          2.55
8          2.55
9          2.55
10         2.55
=====
F1 TOP  F2 BOT  F3 FIND F4 LIST F5 EDIT F6      F7 ADD  F8 DEL  F9      F10EXIT

```

Figure 2.2.1.2-1 RMF (OCE) factor file.

2.2.1.3 F4C to AMS Conversion Codes. This table contains a listing of all F4C codes and the appropriate AMS code conversion values for each F4C code. The table has been copied directly from HQIFS.

F4C TO AMS CONVERSION TABLE			
F4C CODE	AMS NUMBER	F4C CODE	AMS NUMBER
1110000	K5210	1132100	K5220
1111000	K5210	1133000	K5210
1111100	K5220	1133100	K5210
1112000	K5210	1133200	K5210
1112100	K5220	1133300	K5220
1113000	K5210	1133400	K5220
1113100	K5220	1133500	K5220
1114000	K5210	1134000	K5210
1114100	K5220	1134100	K5220
1121000	K5210	1135000	K5210
1121100	K5220	1135100	K5220
1122000	K5210	1136000	K5210
1131000	K5210	1136100	K5220
1131100	K5220	1137000	K5210
1132000	K5210	1137100	K5220

F1 TOP F2 BOT F3 FIND F4 LIST F5 EDIT F6 F7 ADD F8 DEL F9 F10EXIT

Figure 2.2.1.3-1 F4C to AMS conversion table.

2.2.1.4 Report Periods. This table allows you to enter the name of your installation exactly the way you want it to appear on all reports, and the current report period beginning and ending years.

Beginning and ending report years are normally changed once per year. The system will automatically perform this function upon request as you edit this information.

```

Report Periods
-----
Command mode
Name of Installation .....[LEARNING THE MRPSS SYSTEM  ]
Beginning Report Year .....[1986]
Ending Report Year .....[1995]
Material Location Adjustment [1.000]
Material Time Adjustment ....[1.000]
RMF Time Adjustment .....[1.000]
Organization ID .....[Y1]
Maximum Lines Per Page .....[66]
Virtual Drive Letter .....[ ]
Cost Adjustment Factor.....[1.000]
-----
F1 F2 F3 F4 F5 EDIT F6 F7 F8 F9 F10EXIT

```

Figure 2.2.1.4-1 Report periods.

The material costs stored in the database are for the Washington, DC area. The Material Location Adjustment Factor found in Table 2.1 (copied from AR 415-17) must be entered to obtain more accurate material costs for your area.

If material costs are not updated yearly, a Material Time Adjustment Factor can be used to bring the existing material costs to current resource costs. This factor will be provided to you by headquarters.

If the RMF factors are not updated yearly, an RMF Time Adjustment will be required to modify the existing RMF values to produce current resource requirements. This factor will be provided to you by headquarters.

Each organization has a unique two-character MRPM organization ID which is used to name files in the PC model. This ID is listed in Table 4.3, Organizational Codes and Organization Descriptions for Personal Computer Files.

The number of lines on the printed page can be entered for your printer. For a normal 11-in. long page printing six lines per inch the value would be 66. This function is currently not used by the system.

If you have a 3 MEG RAM memory board in your computer, you must enter the drive letter so the computer knows where this drive is located. If you do not have the added memory enter a blank.

2.2.1.5 Unit Cost Factors.

```

=====
UNIT COST FACTORS
=====
ID CODE      :  FA
UNIT COST S.C.M. :  1.00
A.R.M. FACTOR :  1.10
DEFAULT MRT FACTOR :
=====
YEAR      MRT FACTOR
1          .00
2          .00
3          .00
4          .00
5          .00
6          .05
CUR DN    7          .19
8          .24
9          .30
10         .28
=====
F1 TOP  F2 BOT  F3 FIND F4 LIST F5 EDIT F6GRAPH F7 ADD  F8 DEL  F9      F10EXIT

```

Figure 2.2.1.5-1 Unit cost factors.

This table contains all unit cost by age information for one group of facilities such as all administration buildings, regardless of the F4C current use code. The two-digit ID code is used in the F4C Resource Description Table described in the next section. The unit cost special condition multiplier allows you to adjust the unit costs to account for local conditions. The Annual Recurring Maintenance (ARM) Factor is constant for every year. The major cost task and replacement tasks are summarized and listed for 80 years. When a facility is older than 80 years, the 80th year's data will always be applied.

This table will be updated by Army headquarters periodically. You will not have to edit this table unless you wish to change the special condition multipliers.

2.2.1.6 Current Use Summary (AMS) Description Editor.

```

#####
      AMS DESCRIPTION EDITOR
#####
      COMM MODE
#####

      AMS CODE: K2700
      DESCRIPTION: BACHELOR HOUSING
#####

F1 TOP  F2 BOT  F3 FIND F4 LIST F5 EDIT F6      F7 ADD  F8 DEL  F9      F10EXIT

```

Figure 2.2.1.6-1 AMS description editor.

This table contains the descriptions for each current use summary code (AMS).

2.2.1.7 Area Identification and Subinstallation.

```

#####
      INSTALLATION AREA DESCRIPTIONS
#####

      AREA ID 01
      SUB-INSTALLATION ID
      DESCRIPTION Summary Data
#####

F1 TOP  F2 BOT  F3 FIND F4 LIST F5 EDIT F6      F7 ADD  F8 DEL  F9      F10EXIT

```

Figure 2.2.1.7-1 Installation area descriptions.

You can divide your installation into subinstallations (Tank Command, Communications Command) and subinstallations into areas (Tank Command Barracks, Tank Command Training Ranges). Each area must have its own unique ID, i.e., subinstallation 1 can be composed of areas 1 through five and

subinstallation 2 can be composed of areas six through 10. The two screens allow you to define your subinstallation and areas within the installation or subinstallation.

2.2.1.8 LAN Unit Cost Graph. MPRM graphics requires a full 640K of storage. Some Local Area Networks (LANs) require the use of 100 to 200K. When graphing under the unit cost factors option, graphics will not work. After trying to graph normally under the unit cost factor option move to this option and the graph will appear. You must select the graph option under the unit cost factor function before this graph will work correctly.

```

#####
          SUBINSTALLATION DESCRIPTIONS
#####

          SUBINSTALLATION ID 01
          DESCRIPTION SUMMARY
#####
#####
F1 TOP  F2 BOT  F3 FIND F4 LIST F5 EDIT F6      F7 ADD  F8 DEL  F9      F10EXIT

```

Figure 2.2.1.8-1 Subinstallation description.

2.2.2 Facility Resource Data.

```

#####
          Facility Resource Data
          Selection Menu
#####

          F4C Resource Description Table
          Trade and Costs
          Total/Partial Summary Tasks
          F4C Description Editor

          Updated 12 Sep. 1988
#####
F1      F2      F3      F4      F5      F6      F7      F8      F9      F10EXIT

```

Figure 2.2.2-1 Facility Resource data selection menu.

2.2.2.1 F4C Resource Description Data. The data in the following four tables have been developed by HQUSACE. It is average data based upon normal operating conditions in the Washington, DC, area.

Facilities are grouped within the system by the F4C range (beginning, ending F4C). Within each F4C range, facilities are subdivided by facility construction year range (beginning, ending year).

Every type of facility, such as buildings, requires four tables that describe resource requirements. Resources for some facility types vary depending on the construction year of the facility. The following screen identifies the names of the four tables to be applied for each F4C range.

```

#####
□      MACOM LEVEL      □
□      BASIC INFORMATION □
□      F4C RESOURCE DESCRIPTION □
#####

#####
□ BEGINNING F4C      : 1418200 □
□ ENDING F4C        : 1418299 □
□ TREE-ID TABLE    : BF      □
□ TOTAL SUMMARY TABLE : AT      □
□ TOTAL UNIT COST ID TABLE : UN      □
□ PERM. UNIT COST ID TABLE : P1      □
□ TEMP. UNIT COST ID TABLE : T1      □
□ BEGINING YEAR      : 0000      □
□ ENDING YEAR        : 9999      □
#####

```

F1 TOP F2 BOT F3 FIND F4 LIST F5 EDIT F6 F7 ADD F8 DEL F9 F10EXIT

Figure 2.2.2.1-1 F4C Resource description.

1. Component/Task Tree ID Table. Every facility type can be divided into systems, subsystems, components, and tasks. Tree tables containing the description of this division have a unique two-character ID and contain all divisions of a facility from the total facility through the tasks at the bottom of the tree.

2. Basic Task Table. (not used by the current system) All information related to task resources is stored in the Basic Task Tables. A general facility type such as buildings may have one tree table, but several Basic Task Tables, i.e., one for housing, administration, training, etc. Each table has a unique two-character ID. This table is empty for the summary level system.

3. Total Summary Table. (not used by the current system) A summary of the total facility resources required and the totals converted to resource per sq ft values are contained in the Total Summary Table. In order to allow you to model facilities using construction year and floor area without going to the individual task level, detailed models were performed to sample facilities at 10 installations. Resources were averaged to produce an Army-wide labor, material, and equipment resource requirement for each system, subsystem, and component of the facility. Buildings may have several summary tables--one for housing, administration, training, etc. Each table has a unique two-character ID. Some facilities may have different tables depending upon the construction year.

4. Total (Permanent and Temporary) Facilities Unit Cost Table. This table contains a pointer to the correct total unit costs to apply to this facility group. All facilities are included in this task.

5. Permanent Facilities Unit Cost ID Table. This table contains only permanent facility data.

6. Temporary Facilities Unit Cost ID Table. This table contains only temporary facility data.

```

#####
X                                     X
X      #####                         X
X      X          TRADE AND COSTS DATA          X
X      #####                         X
X                                     X
X                                     X
X                                     X
X                                     X
X      #####E                                X
X      X TRADE INDEX       :   01                X
X      X DESCRIPTION       :   Carpentry           X
X      X SHOP CODE         :   SI                  X
X      X INHOUSE LABOR     :        13.44    CONTRACT LABOR       :        16.13 X
X      X INHOUSE EQUIPMENT :        2.60    CONTRACT EQUIPMENT   :        3.90 X
X      #####Y                                X
X                                     X
X                                     X
X                                     X
X      #####eV                               X
X                                     X
X                                     X
X                                     X
X      #####eV                               X
X                                     X
X      F1 TOP  F2 BOT  F3 FIND F4 LIST F5 EDIT F6      F7 ADD  F8 DEL  F9      F10EXIT

```

2.2.2.3 Total/Partial Summary Tasks. NOT USED BY THE CURRENT VERSION) - Each summary table is related to one component tree table and this Tree ID must be entered as the first data item. MRPM allows you to model facilities with less detail than the task level. Facilities at 10 installations were modeled in detail at the task level. The resulting labor hours, material dollars, and equipment hour resources were averaged to form the average resource requirements for an Army facility. These Army average summary data were calculated for the total facility, and every system, subsystem, and component of the facility. The results are stored in the total summary tables. The partial task summary tables contain the combined resource requirements for all low-cost tasks at the component level.

```

#####
Total/Partial Summary Tasks                                07/24/89
#####
Command Mode
(1) Tree ID      [bf]
(2) Group ID     [at]
(3) Description [Total Summary for Admin. Facly]
#####
F1 Top  F2 Bot  F3 Find F4 List F5 Edit F6Select F7 Add  F8 Del  F9      F10Exit

```

Figure 2.2.2.3-1 Total/partial summary tasks.

The Total/Partial Summary Task screen allows you to edit the table names. When the table that you want to review is shown on the screen, press the F6 SELECT key. This will take you to the Basic Task Summary Editor where you can view or edit the data in this table.

```

MODE: COMMAND          BASIC TASK SUMMARY EDITOR

Component Id:          [0000000]
Component Description: [Total Resources for facility ]
Trade Index:          [ 2]          Unit of Measure Id: [ 2]
Classification Indicator: [ 0]
Work Performance Method 1: [1]
Work Performance Method 2: [1]
Work Performance Method 3: [1]
Work Performance Method 4: [1]
Work Performance Method 5: [1]
Work Performance Method 6: [1]
Number of Years:      [80]

YEAR   LABOR HOURS   MATERIAL COST   EQUIPMENT HOURS
1 [ .001731] [ .001709] [ .001731]
2 [ .014464] [ .046092] [ .014434]
3 [ .015455] [ .047981] [ .015425]
4 [ .022551] [ .054326] [ .022521]
5 [ .015993] [ .053188] [ .015963]
6 [ .017731] [ .073236] [ .017701]
7 [ .036468] [ .142301] [ .036438]
8 [ .016115] [ .054567] [ .016084]
9 [ .040663] [ .628187] [ .040632]
10 [ .024941] [ .191339] [ .024911]

F1 TOP  F2 BOT  F3 FIND F4 LIST F5 EDIT F6      F7 ADD  F8 DEL  F9      F10EXIT

```

Figure 2.2.2.3-2 Basic task summary editor.

The Basic Task Summary Editor screen allows you to edit the individual task summaries. You may define labor, material, and equipment resources for any time period from 1 to 80 years in duration.

2.2.2.4 Current Use (F4C) Description Editor.

```

#####
F4C DESCRIPTION EDITOR
#####
F4C CODE: 1110000
DESCRIPTION: AIRFIELD PAVEMENTS- RUNWAYS
#####
F1 TOP F2 BOT F3 FIND F4 LIST F5 EDIT F6 F7 F8 F9 F10EXIT

```

Figure 2.2.2.4-1 F4C Description editor.

This table contains the descriptions for the current use (F4C) codes.

2.3 Facility Information. The computer system allows you to combine many individual facilities into one summary facility group. Summary facility groups are formed by individual appropriation by temporary and permanent facilities as shown in Table 1.1 Groups are then formed by current use code and construction year.

2.3.1 Facility Information Selection Menu. This menu allows you to perform all activities related directly to an individual facility or group of facilities. The following functions are available:

```

          eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
          a          FACILITY INFORMATION          a
          a          SELECTION MENU              a
          aeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee#

          RESOURCE CALCULATION
          DISPLAY RESOURCES
          GENERAL INFORMATION
          FACILITY REPORTS
          MODEL FACILITY
          DELETE RESOURCE TOTAL FILE
          COMBINE FACILITY TOTALS FILES
          LAN DISPLAY GRAPH

          aC:\DATA\LEARN
          aeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee#
          F1      F2      F3      F4      F5      F6      F7      F8      F9      F10EXIT

```

Figure 2.3.1-1 Facility information selection menu.

1. Resource Calculation. This selection allows you to perform a resource prediction for facilities by specifying: (1) The facility ID for one facility, (2) The range of facility IDs to be calculated as individual facilities, or (3) The range of F4C codes to be calculated as individual facilities. One resource prediction will be calculated for each facility within the range specified.

2. Display Resources. This selection allows you to view resource prediction values on the CRT screen in both a table format and graphic format.

3. General Information. This selection allows you to enter the basic information describing each facility.

4. Facility Reports. This selection allows you to obtain several different reports on your printer.

5. Model Facility. This selection allows you to prepare a model of a facility or facility group.

6. Delete Resource Total File. This selection allows you to delete the largest files to free space after you are finished with the data.

7. Combine Facility Totals File. This section allows a MACOM to combine its reporting installations into one total for the MACOM.

8. LAN Display Graphics. The LAN may require space within your 640K bytes of ram. The MRPM system requires the full 640K bytes to display tables and graphs in the same "Display Resources" function, when the normal display resources graph program states that there is insufficient memory, enter this option and the graph will appear.

```

Resource Calculation
12-14-89 Revision 6.53 14:38:42
Installation: LEARNING THE MRPMSS SYSTEM
Report Period Years: 1986 - 1995
Mat Adj =1.000 , Mat Time Adj=1.000 , RMF Time Adj=1.00
Set Run Parameters
Set Ranges
Not Used
Accept Values & Start Run
MODELING METHOD (2)Unit Cost by Age
CALCULATION METHOD (N)Not used With Modeling Method Selected
TASK DISTRIBUTION METHOD (N)Not used With Modeling Method Selected
FACILITY SELECTION (1)All Facilities
SUBDIRECTORY USAGE (2)Use main directory ;Delete Files
UNIT COST ID TABLE USED (1)Permanent and Temporary
Facility:000000000-ZZZZZZZZ
Use keys to position to selection & hit ENTER | hit F10 to exit program

```

Figure 2.3.2-1 Resource calculation.

2.3.2 Resource Calculation Menu. The options shown on screen are the standard options for calculation.

This screen allows you to perform resource prediction calculations for individual facilities. For the F4C Summary Model calculations, the screen should be set up to the options shown in Figure 2.3.2-1. Only modeling methods 3, 4, and 7 are available. Use only the options specified in the following paragraphs.

The screen is divided into four parts:

1. Top box. The top portion of the screen displays the current date, time, and MRPM program revision number (i.e., 6.53). The rest of the information in the top portion is defined in the reports period menu (basic information, general information, report period) and is displayed to refresh your memory. This information includes the name of the installation, the beginning and ending report period years, a material location adjustment factor, a material time adjustment (or cost escalation) factor, and an RMF time adjustment (or cost escalation) factor. If this information is not correct, go to the report periods menu and correct the data (Section 2.2.1.4, Figure 2.2.1.4-1).

2. Middle box. The middle portion of the screen contains a list of instructions that can be executed. Use the arrow keys to highlight the correct instruction and press the enter key to make this selection.

a. Set Run Parameters: When this instruction is selected, the system moves to the bottom box and allows you to set the first five rows of information. Use the space bar to see the various options available for each row and select the correct option for your application. Use your arrow keys to move up and down the rows. Use the F10 key to return to the middle portion of the menu.

b. Set Ranges: You may select a group of facilities for calculations by any one of the three methods shown in the FACILITY SELECTION row in the bottom portion of the screen. You may also limit your calculations to the facilities located in a sequential group of directories. This set ranges command allows you to define the range and directories to be used during calculation. Control is passed to the last line of the bottom box. When all valid information has been entered, the F10 key returns you to the middle portion of the screen.

c. Set Report Parameters (OPTION NOT IMPLEMENTED).

d. Accept Values and Start Run: This command allows you to start the calculation process based upon the information already selected. The system performs calculations as specified. Old resource summary tables will be deleted and replaced with the newly calculated results.

The screen will display the facility ID for each facility as the calculations are being performed. A dated and timed list of facilities processed and problems encountered will be printed as a permanent record of the calculation.

Calculations proceed as follows:

1. The system finds the next facility to be processed.
2. The system deletes the old resource summary file.
3. The system performs the calculation of the new resource summary file.
4. The system will save or delete the resource summary files as directed.

Calculation time: The calculation times vary depending on the type of computer system. Times given are based upon the standard MRPM hardware. Calculation times vary for each MODELING METHOD:

1. Gross floor area only - eight facilities per minute.
2. Recurring Maintenance Factors (RMF) - 12 facilities per minute.

3. Bottom Box. The bottom portion of the screen shows the calculation request information.

a. Modeling Method:

1. Unit Cost by Age: The system will use the gross floor area listed in row 8 of the general facility information table and apply the annual recurring maintenance (ARM) factor and the major cost task and replacement task (MCR) factors.

2. Gross floor area only: The system will use the gross floor area listed in row eight of the general facility information table and apply the average Army summary resource requirements with your labor, material, and equipment rates.

The system will take the year of construction (i.e., 1942) and the report period dates (i.e., 1986 through 1995) and convert the report years to facility ages (1986: Age = 44, 1995: Age 53). The system will go to the correct total resource summary table and read the labor hours (LH), material cost (MC), and equipment hours (EH) resource requirements per unit of measure for the required ages (i.e., Age = 44, LH = .069 hr/sf, MC = \$0.76/sf, EH = .037 hr/sf). The system will go to the Trade Cost Table and read the carpentry shop rates for labor and equipment (L = \$10.00/hr, E = \$2/hr). Total resource requirements will

be produced by multiplying the facility gross square feet of floor area (i.e., 2000 SF) by the average resource requirement (i.e., .069 hr/sf) or 138 hours. Dollar costs are produced by multiplying total resources (i.e., 138 hr) by the labor rate (i.e., \$10/hr) or \$1,380.

3. Recurring Maintenance Factors (RMF): The system will use the gross floor area listed in the general facility information table and apply the recurring maintenance factors for the installation (the average of the last several years expenditures).

The system will take the year of construction (i.e., 1942) and the report period dates (i.e., 1986 through 1995) and convert the report years to facility ages (1986: Age = 44, 1995: Age = 53). The system will go to the RMF Factor Table and read the total cost per unit of measure for the required ages (i.e., Age = 44, total cost = \$0.76/SF). Total dollar costs are produced by multiplying total resources per unit of measure (i.e., \$0.76/SF) by the gross square feet of floor area (i.e., 2000 SF) or \$1,520.

4. F4C Summary Data: This option is used with the F4C Summary Model only. The system will calculate facilities as specified in the General Facility Information Program. The system will skip the calculation of facilities that have no valid RMFs. Building facilities will be calculated using unit costs (ARM and HRT). Nonbuilding facilities use RMFs.

b. Facility Selection: You can select one of three facility processing methods by hitting the space bar. The starting and ending points for the range are set on the last row of the bottom box.

1. All facilities: With one command you can specify calculation of all facilities for your installation.

2. Facility number range: You may specify a range of facility numbers to be calculated. The system will calculate one resource summary file for each facility from the first specified through and including the last facility number specified.

3. F4C range: You may specify a specific range for calculation. The system will calculate one prediction for each facility that has an F4C number within the range specified.

c. Subdirectory Usage: Several options are available; use only [2] main directory; delete files: The totals (CACES No: 0000000) for each facility will be stored in the installation directory. The resource summary files will be deleted from the computer to allow room for the next calculations to continue.

d. Facility Type to be Processed: You may select permanent or temporary, or total.

e. Facility/F4C: List the beginning and ending ranges specified in the FACILITY SELECTION row above.

4. Command Line. The last line on the screen shows you what function keys are available for your application.

2.3.3 Display Resources. This feature allows you to review the table of resource requirements and to create a bar chart from any one of the eight rows of information shown on the screen.

Facility Total Resource Summary File
 FACILITY ID: A61012C60
 SEQUENCE NO: 0001
 1986 Total ten years cost: 046551
 1987 1988 1989 1990

	1991	1992	1993	1994	1995
5 RMF Costs	0	0	0	0	0
6 ARM Costs	45191	45191	45191	45191	45191
7 MRT Costs	37946	48295	54160	26907	28977
8 Tot Costs	83137	93486	99351	72098	74168

5 RMF Costs	0	0	0	0	0
6 ARM Costs	45191	45191	45191	45191	45191
7 MRT Costs	53125	37601	38636	45536	23457
8 Tot Costs	98316	82792	83827	90727	68649

Command Mode
 F1=TOP F2=BOT F3=FIND F4=LIST F5=GRAPH PgUp=PREV PgDn=NEXT F10=EXIT

Figure 2.3.3-1 Facility total resource summary file.

To use this feature, you must have a MICROSOFT GRAPH package to do graphics.

After pressing the F5 GRAPH and 8 for total costs, the following screen will appear:

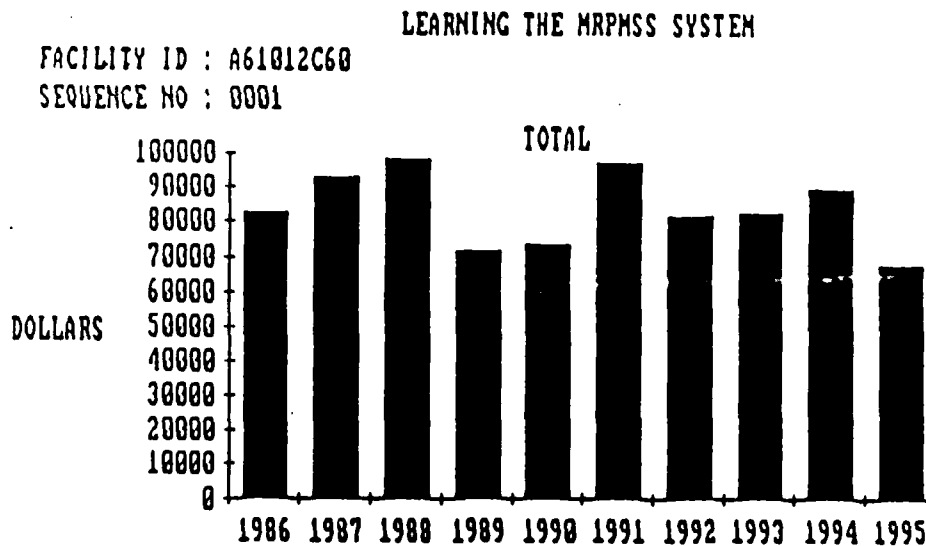


Figure 2.3.3-2 Facility total resource summary graph.

2.3.4 General Information.

```

01-29-90
General Facility Information
*****
*****
Seq [0001] Command Mode
(1) Subinstallation [01] SUMMARY
(2) Area [01] Summary Data
(3) Facility ID[A61012C60] [
(4) F4C Code [6101200][DIVISION HEADQUARTERS BUILDING ]
(5) Number in F/G [ 1]
(6) Travel Zone [ 3]
(7) Square Feet [ 34497]
(8) Construction Year[1960]
(9) W/P Method Index [1] minor-inhouse,major-contract
(10) Special Cond. Mult.ID[01]Normal Conditions
(11) Scheduled disposal date [ ] [mm-dd-yy]
(12) Last Changed Date [01-29-90] [mm-dd-yy]
(13) Last Calculation Date [01-29-90] [mm-dd-yy]
(14) Facility Funding Profile[01] test
(15) Calculation Modeling Id [1] (1:4) As Entered
(16) Facility Property (Permanent/Tempory (P/T) [P]
*****
F1 TOP F2 BOT F3 FIND F4 LIST F5 EDIT F6 MASK F7 ADD F8 DEL F9UPDATEF10EXIT

```

Figure 2.3.4-1 General facility information.

This screen allows you to describe an individual facility or a number of identical (or similar) facilities as a group of facilities. This information is used by the calculation program to produce a resource estimate. The sequence number (SEQ) is an integer number used by the MRPM to keep track of all tables related to one facility. All table names have the sequence number as the last four characters in the table name. The following information must be entered:

The F4C Summary Model uses the appropriation code shown in Table 1.1 (A = OMA permanent facilities), the F4C (61110), and year of construction expressed as a century letter (A for 1700, B for 1800, C for 1900, D for 2000) followed by the digit year (1964 = C64) to construct Facility ID (611101964). The F4C and square feet fields have valid entries. All other fields contain default values of 1 and are not used by the MPRMSS system.

1. Subinstallation ID (NOT USED IN SHORT MODEL). Two-character ID for the subinstallation.

2. Area ID (NOT USED IN SHORT MODEL). Two-character ID for the area.

3. Facility ID For this system individual facilities are combined into groups of facilities based on the appropriation, permanent or temporary, current use code, and construction year. The first character of the facility ID is a letter that indicates the appropriation and permanent or temporary facility type. Table 1.1 contains a list of all letters. The second through the sixth character are the five-digit current use code. The seventh through the ninth characters indicate the construction year. The seventh character is a letter indicating the century: A for 1700, B for 1800, C for 1900, and D for 2000. The last two characters are the year within the century.

4. F4C Code. ven-character F4C code.

5. Number in F/G (NOT USED IN SHORT MODEL). "1" for an individual facility or the number of individual facilities in a facility group.

6. Travel Zone (NOT USED IN SHORT MODEL). two-character code to define the distance from the shop to the facility from Table 4.3, Travel Zones and Times.

7. Square Feet. Quantity for the primary unit of measure. This would be gross square feet of floor area for building facilities.

8. Construction Year. year the facility was originally built.

9. W/P Method Index (NOT USED IN SHORT MODEL). The way the work will be performed for this facility and enter the two-character work performance ID.

10. Special Condition Multiplier ID (NOT USED IN SHORT MODEL). The correct special condition multiplier list to be applied.

11. Scheduled Disposal Date (NOT USED IN SHORT MODEL). No resources will be programmed for this facility after this date.

12. Last Changed Date. This date is set by the computer as changes are made to this file.

13. Last Calculation Date. This date is set by the computer as calculations are made by the calculation program.

14. Facility Funding Profile (NOT USED IN SHORT MODEL).

15. Calculation Modeling ID. The method to be used to calculate resource predictions for this facility:

a. Unit Cost by Age: The system will use the gross floor area listed in row 8 of the general facility information table, and apply the annual recurring maintenance (ARM) factor and the major cost task and replacement task (MCR) factors.

b. Gross floor area only: The system will use the gross floor area listed in row 8 of the general facility information table and apply the average Army summary resource requirements with your labor, material, and equipment rates.

The system will take the year of construction (i.e., 1942) and the report period dates (i.e., 1986 through 1995) and convert the report years to facility ages (1986: Age = 44, 1995: Age = 53). The system will go to the correct total resource summary table and read the labor hours (LH), material cost (MC), and equipment hours (EH) resource requirements per unit of measure for the required ages (i.e., Age = 44, LH = 0.069 hr/sf, MC = \$0.76/sf, EH = 0.037 hr/sf). The system will go to the Trade Cost Table and read the carpentry shop rates for labor and equipment (L = \$10.00/hr, E = \$2/hr). Total resource requirements will be produced by multiplying the facility gross square feet of floor area (i.e., 2000 SF) by the average resource requirement (i.e., 0.069 hr/sf) or 138 hours. Dollar costs are produced by multiplying total resources (i.e., 138 hours) by the labor rate (i.e., \$10/hr) or \$1380.

c. Recurring Maintenance Factors (RMF): The system will use the gross floor area listed in the general facility information table and apply the recurring maintenance factors for the installation (the average of the last several years expenditures).

The system will take the year of construction (i.e., 1942) and the report period dates (i.e., 1986 through 1995) and convert the report years to facility ages (1986: Age = 44, 1995: Age = 53). The system will go to the RMF Factor Table and read the total cost per unit of measure for the required ages (i.e., Age = 44, total cost = \$0.76/SF). Total dollar costs are produced by multiplying total resources per unit of measure (i.e., \$0.76/SF) by the gross square feet of floor area (i.e., 2000 SF) or \$1520.

17. Permanent/Temporary. field identifies all temporary facilities with a T and all permanent and semipermanent with a P.

```

#####
□                               SEQUENTIAL FACILITY EDITOR                               07/24/89   □
□
#####
□                               #####
□ (1) Subinstallation [00] □
□ (2) Area [nn] □
□ (3) Starting Fac ID: [nnnnnnnn] Ending Fac ID:[nnnnnnnn] □
□ (4) F4C Code [nnnnnn] □
□ (5) Number in F/G [nnn] □
□ (6) Travel Zone [nn] □
□ (7) Square Feet [nnnnnnnn] □
□ (8) Construction Year [nnnn] □
□ (9) W/P Method Index [n] □
□ (10) Special Cond Mult [nn] □
□ (11) Scheduled Disposal Date [mm/dd/yy] [mm/dd/yy] □
□ (12) Last Changed Date [mm/dd/yy] [mm/dd/yy] □
□ (13) Last Calc Date [mm/dd/yy] [mm/dd/yy] □
□ (14) Fac Fund Profile [nn] □
□ (15) Calc Modeling ID [n] □
□
#####
F1      F2      F3      F4      F5      F6      F7      F8      F9 SAVE F10EXIT

```

Figure 2.3.4-2 Sequential facility editor.

2.3.5 Reports. All reports can be generated and stored in a computer print file under a name assigned by you. You may review the reports on your screen, print your reports to a printer, and move your reports to another computer system such as a word processing system.


```

*****
AMS/F4C Summary Report
Input Screen
*****
AMS Summary Report  (toggle space bar to change)

Enter the low AMS Code: K2000
Enter the high AMS Code: K2999

Enter the low Facility ID:      (Enter blanks to
Enter the high Facility ID:    print all facilities)

Enter the starting year: 1986
Enter the number of years to report: 10 (max 10)

K Unit      (toggle space bar to change)
Print to BOTH (toggle space bar to change)
Enter Filename SUMMARY.OSR

*****
F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT

```

Figure 2.3.5.1-1 AMS/F4C Summary report.

The first line of the heading for each page of this report states the name of the report "ORGANIZATIONAL SUMMARY REPORT." The second line of the heading gives the installation name "Installation: Funding Reporting System Demo," the date the report was generated "5/JUN/87," and the page number of the report "Page: 1".

The body of each page contains two summary tables. Area totals are given first. Subinstallation totals are given second. Installation totals are given last. F4C codes are printed with each summary total. The subinstallation or installation and area IDs are printed as the left side heading. The total number of facilities summarized in the group and the total gross square feet of floor area for all summarized facilities is also printed.

There is one column of data for each report year. The year is printed as the column header.

There are four rows of information:

1. RMF. Total costs for facilities calculated using the RMF method. In most cases this will be for nonbuilding facilities.

2. ARM. Total costs for the annual recurring maintenance portion of the resource requirement.

3. MRT. Total costs for the major cost tasks and replacement tasks portion of the resource requirements.

4. Total. Total of the above three items.

2.3.5.2. Facility Totals Report.

```

*****
*                                     *
*                               FACILITY TOTALS REPORT                       *
*                               *****                                     *
*                               INPUT SCREEN                                *
*                               1) ENTER THE FACILITY ID                    *
*                               2) ENTER THE F4C CODE                      *
*                               *****                                     *
*                               CHOOSE OPTION 1 OR 2: 1                    *
*                               *****                                     *
*                               F1    F2    F3    F4    F5    F6    F7    F8    F9    F10EXIT
*****

```

Figure 2.3.5.2-1 Resource summary input - screen 1.

This function allows you to print one report containing the total dollars predicted for each facility. You may select the report by Facility Number or F4C code.

```

*****
*                                     *
*                               FACILITY TOTALS REPORT                       *
*                               *****                                     *
*                               INPUT SCREEN                                *
*                               ENTER LOW FACILITY ID :000000000            *
*                               ENTER HIGH FACILITY ID :ZZZZZZZZZ          *
*                               ENTER THE STARTING YEAR: 1986              *
*                               ENTER NUMBER OF YEARS TO REPORT(MAX 10): 10 *
*                               *****                                     *
*                               F1    F2    F3    F4    F5    F6BEGIN F7    F8    F9    F10EXIT
*****

```

Figure 2.3.5.2-2 Resource summary input - screen 2.

If you select the facility report, you may select a range of facility numbers to be totaled, the starting year, and the number of years to report.

```

#####E
 FACILITY TOTALS REPORT
#####
 INPUT SCREEN
 ENTER LOW F4C CODE :6000000
 ENTER HIGH F4C CODE :6999999
 ENTER THE STARTING YEAR:1986
 ENTER NUMBER OF YEARS TO REPORT(MAX 10): 10
#####

```

F1 F2 F3 F4 F5 F6BEGIN F7 F8 F9 F10EXIT

Figure 2.3.5.2-3 Resource summary input - screen 3.

If you select the F4C reports, you may also select a range of F4C codes, and all facilities within the F4C range will be totaled.

```

#####E
 FACILITY TOTALS REPORT
#####
 INPUT SCREEN
 PRINT IN DOLLARS(D),
 OR THOUSANDS DOLLARS(T): D
 REPORT CONTENTS : 1
 1-INDIVIDUAL FACILITIES
 2-INDIVIDUAL FACILITIES PER SQ. FOOT
 PRINT OPTIONS : 1
 1-PRINTER
 2-FILE NAMED:
 3-PRINTER & FILE NAMED :
 PRINT TOTAL OPTIONS : 1
 1-PRINT WITH TOTALS
 2-PRINT TOTALS ONLY
#####

```

F1 F2 F3 F4 Print in Dollars F5 F6BEGIN F7 F8 F9 F10EXIT

Figure 2.3.5.2-4 Resource summary input - screen 4.

For both report types, you may obtain reports in dollars or thousands of dollars. Individual facilities or summaries by three-digit F4C in dollars or dollars per square foot. Reports can be sent to the printer or file.

```

#####
FACILITY TOTALS REPORT
#####

#####
Select Reports to Print(Y/N)
1. RMF COST Y
2. ARM COST Y
3. MRT COST Y
4. TOTAL COST Y
#####

```

F1 F2 F3 F4 F5 F6BEGIN F7 F8 F9 F10EXIT

Figure 2.3.5.2-5 Resource summary input -screen 5.

You may select the appropriate resource to print.

2.3.5.3 Unconstrained Requirements Report (URR) and Comparison Reports.

```

#####
UNCONSTRAINED REQRMNTS REPORTS
SELECTION MENU
#####

URR Editor
Escalation Factor Editor
Produce Report's

C:\DATA\LEARN
#####
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10EXIT

```

Figure 2.3.5.3-1 URR comparison report selection menu.

The Unconstrained Requirements Report Selection Menu allows you to perform three basic functions:

1. URR Editor. This selection allows you to enter URRs that have been performed separate from the MRPM system.

2. Escalation Editor. This selection allows you to enter the cost escalation factors for each appropriation. Cost escalation factors are applied to produce a URR report in actual dollars.

3. Produce Reports. This selection allows you to produce three URR reports.

a. A comparison between the MRPM-generated URR values and the URR values generated not using MRPM.

b. A constant dollar URR where all costs are expressed in terms of the dollar value during the first report year.

c. An actual dollar URR where all costs are expressed in terms of the dollar values in each year.

2.3.5.3.1 Edit the Manually Produced Unconstrained Requirements Report (URR). This screen allows you to enter square feet in thousands and dollars in thousands from an existing manually produced unconstrained requirements report (URR). Values can be transferred from the RISE system or any other automated system by pressing the F9 RISE function key. The values stored in an ASCII file will be read into this database and displayed on the screen.

The format for the ASCII file is as follows:

1. File name. Suffix ".URR".

2. File format.

a. Record 1: First reporting year, I2 (90)

For Each Reporting Year (Y)

b. Record Format:

1. URR line number, I2
2. space
3. square feet, in thousands, I9, right justification
4. space
5. dollars, in thousands, I9, right justification.

- c. Record: Year
- 1 Training
 - 2 Maintenance and Production
 - 3 RDTE
 - 4 Storage
 - 5 Hospital and Medical
 - 6 Administration
 - 7 BOQ
 - 8 Community
 - 9 Family Housing
 - 10 Other.

```

      EDIT URR                                01/29/90
=====
      AMS: [K2600]  ADMINISTRATION
COMMAND MODE
=====
      Year      URR KSF      URR K$
      1986      98.0        330.0
      1987      98.0        390.0
      1988      98.0        390.0
      1989      98.0        410.0
      1990      98.0        410.0
      1991      98.0        420.0
      1992      98.0        420.0
      1993      98.0        430.0
      1994      98.0        430.0
      1995      98.0        430.0
=====
F1 TOP  F2 BOT  F3 FIND  F4 LIST  F5 EDIT  F6 RISE  F7 ADD  F8 DEL  F9      F10EXIT

```

Figure 2.3.5.3-2 Edit URR.

Use the F7 ADD key to enter in the AMS number and then the thousands of square feet and thousands dollar values by year.

2.3.5.3.2 Edit the Cost Escalation Factors. This screen allows you to enter factors that will be used to multiply the constant dollar URR to produce the actual dollar URR. One set of ten factors are stored by appropriation code. The space bar is used to move between appropriations. The factors can be edited using the F5 key or listed using the F4 key.

URR COMPARISON REPORT (TOTAL)

ORGANIZATION: LEARNIN

Page 1
Date 08-18-89

AMS ID = K2600 ADMINISTRATION

YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
IFS KSF	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1
URR KSF	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
% Difference	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3
MRPM K\$	280.1	333.0	257.5	242.2	299.5	264.0	255.9	314.4	259.4	244.8
% Difference	84.9	85.4	86.0	59.1	73.1	62.9	60.9	73.1	60.3	55.6
INST URR K\$	330.0	390.0	390.0	410.0	410.0	420.0	470.0	430.0	430.0	440.0
MRPM URR K\$	251.6	299.1	231.3	217.6	269.0	237.1	229.8	282.4	232.9	219.8
% Difference	76.2	76.7	59.3	53.1	65.6	56.4	54.7	65.7	54.2	50.0

AMS ID = K2000 Summary (not include Family Housing)

YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
IFS KSF	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1
URR KSF	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
% Difference	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3
MRPM K\$	280.1	333.0	257.5	242.2	299.5	264.0	255.9	314.4	259.4	244.8
% Difference	84.9	85.4	86.0	59.1	73.1	62.9	60.9	73.1	60.3	55.6
INST URR K\$	330.0	390.0	390.0	410.0	410.0	420.0	470.0	430.0	430.0	440.0
MRPM URR K\$	251.6	299.1	231.3	217.6	269.0	237.1	229.8	282.4	232.9	219.8
% Difference	76.2	76.7	59.3	53.1	65.6	56.4	54.7	65.7	54.2	50.0

Figure 2.3.5.3-5 URR Comparison report.

The first three rows of the report contain the square footage found in the IFS system, the square footage entered in the URR and a percent comparison (IFS/URR * 100).

The first line in the second section gives the MRPM predicted dollar amount based on the IFS square footage. The second line is a percent comparison of the first and third lines (MRPM \$/URR \$ * 100). The fourth line (MRPM URR K\$) is the MRPM prediction comparable to the URR square footage (MRPM \$ * URR KSF/IFS KSF). The last line is the percent difference (MRPM URR K\$/INST URR K\$ * 100).

When the cursor is at the first line on the screen, the space bar can be used to change report options between the (1) URR comparison report, and (2) an URR report based on the MRPMSS data. The fields are as defined below.

2.3.5.3.3.2 Produce a Constant Dollar Unconstrained Requirements Report.

```

      URR Comparison Report & Basic Report
      aeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee#
      eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeef
      URR Report (Constant)  [toggle space bar to change]
      Enter the low AMS Code: K2600
      Enter the high AMS Code: K2600
      Enter the low Facility ID:      (Enter blanks to
      Enter the high Facility ID:    print all facilities)
      Enter the starting year: 1986
      Enter the number of years to report: 10(max 10)
      Select One: 4.
      (1) RMF (2) ARM
      (3) MRT (4) TOTAL
      Print to BOTH [toggle space bar to change]
      Enter Filename K2600.URC
      aeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee#
      F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT
  
```

Figure 2.3.5.3-6 URR Comparison report input screen - constant dollars.

The report contains the square footage and dollars both expressed in thousands for each year.

URR REPORT (Constant) (TOTAL)

ORGANIZATION: LEARNING THE MRPMS SYSTEM

from 000000000 to ZZZZZZZZZZ

Page 1
Date 01-29-90

AMS ID = K2600 ADMINISTRATION

YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
IFS KSF	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1
MRPM k\$	280.1	333.0	257.5	242.2	299.5	264.0	255.9	314.4	259.4	244.8

AMS ID = K2000 Summary (not include Family Housing)

YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
IFS KSF	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1
MRPM k\$	280.1	333.0	257.5	242.2	299.5	264.0	255.9	314.4	259.4	244.8

Figure 2.3.5.3-7 Constant dollar URR report.

2.3.5.3.3.3 Produce an Actual Dollar Unconstrained Requirements Report. The input screen and report format are identical to the formats above. The constant dollar URR values are multiplied by the correct appropriation cost adjustment factors to produce the actual dollar URR.

```

=====
                URR Comparison Report & Basic Report
=====
                URR Report (Actual)          [toggle space bar to change]
                Enter the low AMS Code: K2600
                Enter the high AMS Code: K2600
                Enter the low Facility ID: 000000000 (Enter blanks to
                Enter the high Facility ID: ZZZZZZZZZ print all facilities)
                Enter the starting year: 1986
                Enter the number of years to report: 10(max 10)
                Select One:      4
                (1) RMF   (2) ARM
                (3) MRT   (4) TOTAL
                Print to PRINTER          [toggle space bar to change]
=====
F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT

```

Figure 2.3.5.3-8 URR comparison report input screen - actual dollars.

```

                URR REPORT (Actual)          (TOTAL)

ORGANIZATION:  LEARNING THE MRPMS SYSTEM
                                from 000000000 to ZZZZZZZZZ
                                Page 1
                                Date 01-29-90

AMS ID = K2600      ADMINISTRATION

YEAR              1986      1987      1988      1989      1990      1991      1992      1993      1994      199
IFS KSF           109.1     109.1     109.1     109.1     109.1     109.1     109.1     109.1     109.1     109
MRPM k$          280.1     333.0     257.5     242.2     299.5     264.0     255.9     314.4     259.4     244

AMS ID = K2000      Summary (not include Family Housing)

YEAR              1986      1987      1988      1989      1990      1991      1992      1993      1994      199
IFS KSF           109.1     109.1     109.1     109.1     109.1     109.1     109.1     109.1     109.1     109
MRPM k$          280.1     333.0     257.5     242.2     299.5     264.0     255.9     314.4     259.4     244

```

Figure 2.3.5.3-9 URR report.

2.3.5.4 View and Print Report Files.

```

=====
VIEW & PRINT REPORT FILES
=====
CHOOSE THE TYPE OF REPORT FILES:  1

1: Organizational Summary Reports
2: Facility Total Reports
3: Unconstrained Requirements Reports (constant)
4: Unconstrained Requirements Reports (actual)
5: URR Comparison Reports

=====
F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT

```

Figure 2.3.5.4-1 View and print report files - screen 1.

You can review and/or print any previously generated and stored report by highlighting the report to be reviewed and pressing the correct function key.

```

=====
VIEW & PRINT REPORT FILES
=====
Input the File Name of
Organizational Summary Report

=====
F4C60000 K2600
=====
F1      F2      F3      F4PRINT F5      F6 VIEW F7      F8 DEL  F9      F10EXIT

```

Figure 2.3.5.4-2 View and print - screen 2.

```

Installation: LEARNING THE MRPMS SYSTEM
Installation Totals

Number of Facilities: 2
Total Square Footage: 109117

Costs in Dollars
Year      1986      1987      1988      1989      1990      1991
R.M.F.    .00      .00      .00      .00      .00      .00
A.R.M.  142943.30  142943.30  142943.30  142943.30  142943.30  142943.30  14294
M.R.T.  137191.30  190073.80  114602.50  99289.05  156577.70  121029.60  11296
Totals  280134.60  333017.10  257545.80  242232.30  299520.90  263972.80  25591
Total dollars for all years  2750859.00

```

```

ORGANIZATIONAL SUMMARY REPORT
F4C 6000000 to 6999999
All Facilities

```

```

Command  *** End-of-file ***      Keys: PgUp PgDn Q=next X=exit ?=Help

```

Figure 2.3.5.4-3 View report.

2.3.6 Model Facility. This system is being used by several organizations. Most organizations use the "standard" file transfer method for moving data from their component data base to the MRPM system. Several organizations use a special format for information transfer. The selection on the screen below will vary depending on organizational needs.

```

      aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
      a      INSTALLATION LEVEL      a
      a      MODEL FACILITY      a
      aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa

      STANDARD
      NATIONAL GUARD
      NON-ARMY ORGANIZATIONS
      V CORPS

aC:\DATA\LEARN
aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
F1      F2      F3      F4      F5      F6      F7      F8      F9      F10EXIT

```

Figure 2.3.6-1 Installation level model facility - screen 1.

The second screen is identical for each organization.

```

=====
MODEL FACILITY FROM IFS INPUT
=====
ENTER INPUT FILE NAME: HOUSES
ENTER:"1" FOR BLDG;"2" FOR NON-BLDG: 1
=====
F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT

```

Figure 2.3.6-2 Installation level model facility - screen 2.

Two different types of standard transfer files for loading into the MRPM system can be produced from the HQ-IFS system: (1) Building file, (2) Nonbuilding file. Both files contain identical information in the following order:

1. Facility ID. (Col 1 through 9)
2. F4C Code. (Col 11 through 17)
3. Subinstallation ID. (Col 17 through 20)
4. Square Feet of Floor Area. (Col 22 through 35, integer, right justified)
5. Year of Construction. (Col 37 through 40, integer right justified)

6. Secondary Unit of Measure. For building facilities, the transfer file contains one summary "facility" for each year of construction for an F4C code (i.e., one entry for F4C = 7112900, Year = 1954, one entry for F4C = 7112900, Year = 1955). The total square feet of floor area for all individual facilities constructed during the year is reported. The total secondary unit of measure for all individual facilities constructed during the year is reported.

For nonbuilding facilities, the transfer file contains one summary "facility" for each F4C code (i.e., one entry for F4C = 8211200). The year is set at 1970 as a default value. The total square footage of floor area for all individual facilities constructed during all years is reported. The total secondary unit of measure for all individual facilities constructed during all years is reported.

MRPMSS combines the F4C code and the year of construction (**** for nonbuildings) to form the facility ID. For nonbuildings, the secondary unit of measure is entered into the MRPMSS floor area field.

2.3.7 Delete Resource Totals File.

[illegible]

Figure 2.3.7-1 Delete resource total file.

This screen allows you to delete the resources when you have completely finished with the information. This will free up most of the storage space for other applications.

2.3.8 Combine Facility Totals File.

```

Combine Facility Totals Files

Warning !

FACILITY.XDB and RSMTTOTL.XDB in Current Directory will be Overwritten

Press F10 to exit          hit any key to start processing

```

Figure 2.3.8-1 Combine facility totals files.

This function is for MACOMs only. You must be in your MACOM directory. The system will destroy both the current general facility information and the resource summary totals files. New files will be created by adding (combining) all reporting installations specified in the organization chart for this MACOM. The MACOM must calculate all reporting installations first before executing this command.

3. LEARNING THE MRPMSS SYSTEM.

3.1 Introduction. This chapter will present the functions to you in the order of most to least frequent use. This presentation method allows you to learn just enough to do your job and stop. You can come back at any time and learn the remaining functions. Note that you will not be exposed to the basic information tables until the end of the chapter. You may not fully understand some of the material used until you have completed the chapter.

This chapter guides you through the MRPMSS system and systematically allows you to work within each data screen.

1. Remove this chapter from your user's manual so you can read the installation functions in Chapter 2 and this chapter simultaneously.

2. Read the text as follows:

a. Read the function heading or title in Chapter 3.

b. Find the reference given to Chapter 2.

c. Read the text in Chapter 2 first. This will describe how each data item is used.

d. Read the text in Chapter 3 next. This text is presented in two parts. The first part describes the work to be done during the learn exercise. The second part provides one set of commands which can be used to solve the problem. You can enter the commands as given to learn to operate the system.

e. Try the commands to learn how the system works. The exact commands to perform each exercise are listed in the commands section for each function.

3. Set up the LEARN database.

Your system has already been loaded with the learn database. The data has been loaded into the \DATA\LEARNBAS directory.

Please use the \DATA\LEARN directory to learn the system. You will have to execute your autoexec file for the MRPMSS system before you enter the MRPMSS. From any prompt type: INSTMESS and press the enter key.

```

#####
      Maintenance Prediction Model
      Installation Selection Menu
#####
Installation name      Batch contents
#####
DOS      CD \
Enter Current Learn DataBase
Create a New Learn DataBase
Training & Doctrine Command
Fort Leonard Wood, Missouri
#####
Page 1
#####
F1      F2      F3SETUP F4      F5 EDIT F6      F7      F8      F9      F10EXIT

```

Figure 3.1-1 Installation selection menu.

The first time you enter the system you will want to create a new learn data base by pressing the down arrow twice to "Create a New Learn Database," and by pressing the enter key. The system will delete all files from the \DATA\LEARN directory and copy new files from the \DATA\LEARNBAS directory.

```

TYPE: MRPMSS (enter key) to Start MRPM System
C:\DATA\LEARN
>

```

Figure 3.1-2 DATA\LEARN screen.

Now follow the directions on the screen:

1. Type MRPMSS.
2. (Enter)

3.2 Main Menu.

```

=====
      Maintenance Prediction Model
      Main Menu
=====
Basic Information
Facility Information

Updated 12 Sep. 1988
=====
F1      F2      F3      F4      F5      F6      F7      F8      F9      F10EXIT

```

Figure 3.2-1 Main menu.

During this training session, you will be using real summary data exactly as you would find it in the Headquarters-Integrated Facilities System (HQ-IFS) database. The amount of data has been kept to a minimum to reduce the time to learn the system.

3.2.1 Facility Information Selection Menu. (read 2.3.1, page 2-14)

```

=====
      Facility Information
      Selection Menu
=====
Resource Calculation
Display Resources
General Information
Facility Reports
Model Facility
Delete Resource Total File
Combine Facility Totals Files

Updated 12 Sep. 1988
=====
F1      F2      F3      F4      F5      F6      F7      F8      F9      F10EXIT

```

Figure 3.2.1-1 Facility information selection menu.


```

#####
MODEL FACILITY FROM IFS INPUT
#####
ENTER INPUT FILE NAME: HOUSES
ENTER:"1" FOR BLDG;"2" FOR NON-BLDG: 1
#####
F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT

```

Figure 3.2.1.1-2 Model facility from IFS input.

6. To model building types: HOUSES
7. (Enter)
8. Type: 1 (for buildings)
9. (Enter)
10. (F6 - BEGIN) (System shows facility IDs copied to the General Facility Information Table)
11. (F10 - EXIT) (to Model Facility)
12. (F10 - EXIT) (to Facility Information Selection Menu).

3.2.1.2 General Information. (read 2.3.4, page 2-20)

```

#####
General Facility Information                                01-29-90
#####
Seq [0001] Command Mode
(1) Subinstallation [01] SUMMARY
(2) Area [01] Summary Data
(3) Facility ID[A61012C60] [
(4) F4C Code [6101200] [DIVISION HEADQUARTERS BUILDING ]
(5) Number in F/G [ 1]
(6) Travel Zone [ 3]
(7) Square Feet [ 34497]
(8) Construction Year[1960]
(9) W/P Method Index [1] minor-inhouse,major-contract
(10) Special Cond. Mult.ID[01]Normal Conditions
(11) Scheduled disposal date [ ] [mm-dd-yy]
(12) Last Changed Date [01-29-90] [mm-dd-yy]
(13) Last Calculation Date [ ] [mm-dd-yy]
(14) Facility Funding Profile[01] test
(15) Calculation Modeling Id [1] (1:4) As Entered
(16) Facility Property (Permanent/Temporary (P/T) [P]
#####
F1 TOP F2 BOT F3 FIND F4 LIST F5 EDIT F6 MASK F7 ADD F8 DEL F9UPDATEF10EXIT

```

Figure 3.2.1.2-1 General facility information.

Now look at the information generated from the modeling located in the General Information Table. The following information has come from IFS:

1. Facility ID. (Appropriation Code Letter - See Table 1.1, five-digit current use code - F4C, three-digit construction year)

2. F4C Code.

3. Square Feet.

4. Construction Year.

All other information has been defaulted as follows:

1. Subinstallation [01] Summary
2. Area [01] Summary Data
5. Number in F/G [1]
6. Travel Zone [3]
9. W/P Method Index [1] minor-inhouse, major-contract
10. Special Condition Multiplier ID [01] Normal Condition
11. Scheduled disposal date []
12. Last Changed Date []
13. Last Calculation Date []
14. Facility Funding Profile [01] Test
15. Calculation Modeling Id [3 or 4] [4:RMF:NONBLDGS, 3:Floor Area:BLDGS]
16. Facility Property (Permanent/Temporary (P/T) []

Obtain a printed list of all facilities.

Commands. From Facility Information Selection Menu:

- | | |
|--|--|
| 1. (↓) twice (to General Information) | 5. Make certain that your printer is on. |
| 2. (Enter) (to General Facility Information Editor) | 6. (F4-LIST) |
| 3. Press F9 UPDATE. The system will add the Port in row number 16. | 7. Type: 1 |
| 4. (page up and down) (to review contents) | 8. (Enter) |
| | 9. (F10 EXIT) (to Facility Information Selection menu) |

We have used several references to other tables. You will not learn more about the tables since this F4C summary model does not use the tables below:

1. Subinstallation
2. Area
3. Travel zone
4. Work performance method
5. Special condition multiplier
6. Facility funding profile
7. Calculation model.

3.2.1.3 Resource Calculation. (Read 2.3.2, page 2-15)

```

Resource Calculation
12-21-89 Revision 6.53 10:21:49
Installation: LEARNING THE MRPMS SYSTEM
Report Period Years: 1986 - 1995
Mat Adj =1.000 , Mat Time Adj=1.000 , RMF Time Adj=1.00
Set Run Parameters
Set Ranges
Not Used
Accept Values & Start Run
MODELING METHOD (2)Unit Cost by Age
CALCULATION METHOD (N)Not used With Modeling Method Selected
TASK DISTRIBUTION METHOD (N)Not used With Modeling Method Selected
FACILITY SELECTION (2)Facility Number Range
SUBDIRECTORy USAG? (2)Use main directory ;Delete Files
UNIT COST ID TABLE USED (2)Total
Facility:000000000-22222222
Use keys to position to selection & hit ENTER | hit F10 to exit program

```

Figure 3.2.1.3-1 Resource calculation.

You have been asked to develop a 10-year resource requirement report for this set of facilities. This report will be the basis for your installation's planning submittal to your Major Command. You have been given the instructions in the paragraph below.

Perform a resource calculation using the total unit costs, not the permanent and temporary unit costs for the years 1986 through 1995 using all adjustment factors of 1.0 (These values have been previously set for you through the Basic Information, Report Period screen).

All calculations must be performed as follows:

1. Set Run Parameters.

- a. Modeling Method: (2) Unit Cost by Age
- b. Facility Selection: (1) Facility Number Range.
- c. Subdirectory Usage: (2) Use main directory; delete files.
- d. Unit Cost ID Table Used: (2) Total

2. Set Facility Selection Range. to 000000000, ZZZZZZZZZ. Now accept values and start to run the calculation.

Commands. From Facility Information Selection Menu:

- | | |
|---|---|
| 1. (Enter) (for Resource Calculation) | 13. Type: 000000000 |
| 2. (Enter) (to Set Run Parameters) | 14. Type: (Enter) |
| 3. Use [2] Unit Cost by Age | 15. Type: 000000000 |
| 4. (↓) (for facility selection) | 16. (F10) (to set ranges) |
| 5. (Space bar) (to facility number range (2)) | 17. (↓) (to accept values and start run) |
| 6. (↓) (for subdirectory usage) | 18. (Enter) (to start calculation) Facility ID displayed as calculated. |
| 7. Use [2] use main directory; delete files | 19. Get your calculation messages from the printer. |
| 8. (↓) for unit cost table | 20. (F10) to Facility Information Selection Menu. |
| 9. (Space bar) (to use [2] total) | |
| 10. (F10) (to Set Run Parameters) | |
| 11. (↓) (to set range) | |
| 12. (Enter) (to facility) | |

The following screen will be displayed as the calculation proceeds.

```

#####
□ Current Directory          □
□ F4C Code = 6101200        □
□ Facility ID = A61012C60   □
□ Calculating               □
#####

```

Turn on the Printer | Press F10 to stop after this facility is calculated

Figure 3.2.1.3-2 Calculation screen.


```

Program: FA-CALC.EXE Revision number: 6.53
Calculation Messages 12-18-89 10:01:16
No Virtual Disk is Assigned
Current Directory \DATA\LEARN

MODELING METHOD          Unit Cost by Age
FACILITY SELECTION      Facility Number Range
                        Facility Range : 000000000 - ZZZZZZZZZ
SUBDIRECTORY USAGE      Use main directory ;Delete Files
UNIT COST ID TABLE USED Total
10:01:36 * Start Facility ID: A61012C60 F4C Code : 6101200 Sequence #:0001
10:01:40 * Start Facility ID: A61024C29 F4C Code : 6102400 Sequence #:0002
10:01:45 * Start Facility ID: A71111C30 F4C Code : 7111100 Sequence #:0003
10:01:48 * Start Facility ID: A71113C57 F4C Code : 7111300 Sequence #:0004
10:01:51 * Start Facility ID: A71124C58 F4C Code : 7112400 Sequence #:0005
10:01:54 * Start Facility ID: A71135C60 F4C Code : 7113500 Sequence #:0006

```

Figure 3.2.1.3-3 Calculation messages.

Review the printed output received. The first two lines give the program name, and revision number and date. The third line states that no virtual disk is assigned. The fourth line gives the current directory. The next five lines state the parameters that you entered to start the calculation. Then one line is shown for each facility calculated. Error messages will be shown if data is missing.

3.2.1.4 Display Facility Totals. (read 2.3.3, page 2-19)

You want to graph the total cost (line 8) for Facility ID A61012C60. Look at the resources in both tabular and graphic form. Which display would you like to be shown, the table or the graph?

Commands. From Facility Information Selection Menu:

1. (↓) (to Display Resources)
2. (Enter) (for Facility Total Resource Summary File)
3. F2 (to view the last record)
4. (F3 FIND)
5. Type: A61012C60
6. (Enter) (table displayed)

Facility Total Resource Summary File
 FACILITY ID: A61012C60
 SEQUENCE NO: 0001
 1986 1987 1988 1989 1990
 Total ten years cost: 846551

	1991	1992	1993	1994	1995
5 RMF Costs	0	0	0	0	0
6 ARM Costs	45191	45191	45191	45191	45191
7 MRT Costs	37946	48295	54160	26907	28977
8 Tot Costs	83137	93486	99351	72098	74168

5 RMF Costs	0	0	0	0	0
6 ARM Costs	45191	45191	45191	45191	45191
7 MRT Costs	53125	37601	38636	45536	23457
8 Tot Costs	98316	82792	83827	90727	68649

Command Mode
 F1=TOP F2=BOT F3=FIND F4=LIST F5=GRAPH PgUp=PREV PgDn=NEXT F10=EXIT

Figure 3.2.1.4-1 Facility total resource summary.

7. (F5 for graph)
8. Type: 8 (for total cost to be graphed)
9. (Enter) (A Microsoft chart screen will be displayed before the graph appears.)

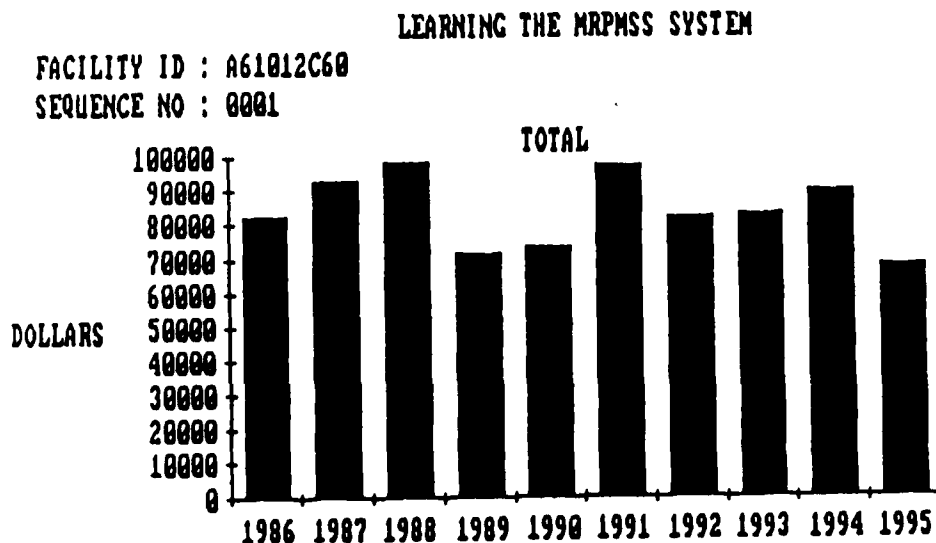


Figure 3.2.1.4-2 Graph facility total.

10. Type: P (for print)
11. Type: P (for printer. The graph will be printed.)
12. Type: q (for quit)
13. (F10) (for Facility Information Selection Menu).

3.2.1.5 Reports. (read 2.3.5, page 2-23)

```

#####
          #####
          FACILITY REPORTS
          SELECTION MENU
          #####
#####

          F4C/AMS ORGANIZATIONAL SUMMARY
          FACILITY TOTALS REPORT
          UNCONSTRAINED REQRMENTS REPORTS
          VIEW AND PRINT REPORT FILES

#####
C:\DATA\LEARN
#####
F1      F2      F3      F4      F5      F6      F7      F8      F9      F10EXIT

```

Figure 3.2.1.5-1 Facility reports selection menu.

Generate one of each report type to see what reports are available.

3.2.1.5.1 F4C/AMS Organization Summary Reports. (read 2.3.5.1, page 2-23) - Use a current use code (F4C) range of low 6000000 and high 6999999, starting year 1986, report years of 10 and print the resource summary information for all facilities to both the printer and a computer file.

Produce a current use summary (AMS) report for K2600 to both the printer and a computer file.

```

#####
          AMS/F4C Summary Report
          Input Screen
          #####
#####

          F4C Summary Report   [toggle space bar to change]
          Enter the low F4C Code: 6000000
          Enter the high F4C Code: 6999999

          Enter the low Facility ID:           (Enter blanks to
          Enter the high Facility ID:          print all facilities)

          Enter the starting year: 1986
          Enter the number of years to report: 10 (max 10)

          Actual Unit           [toggle space bar to change]
          Print to BOTH         [toggle space bar to change]
          Enter Filename F4C60000.OSR

#####
F1      F2      F3      F4      F5      F6      F68EGIN F7      F8      F9      F10EXIT

```

Figure 3.2.1.5.1-1 AMS/F4C Summary report input screen - F4C.

Commands. From the Facility Information Selection Menu:

Produce F4C Report.

1. (↓) three times (to Facility Reports)
2. (Enter) (for Facility Reports)
3. (Enter) (for F4C/AMS Organizational Summary)
4. Press space bar (to move to the F4C Summary Report)
5. (Enter)
6. Type: 6000000 (low F4C)
7. (Enter)
8. Type: 6999999 (high F4C)
9. (enter)
10. (Enter) twice (to print all facilities to starting year)
11. (Enter) (to accept the 1986 starting year)
12. (Enter) (to accept 10 as the number of years to report)
13. Use space bar to select ACTUAL UNIT
14. (Enter)
15. (Press the space bar twice to request a printout and a computer file)
16. (Enter)
17. Type: F4C60000
18. (Enter)
19. (F6) (to begin report)
20. Report will be printed in your printer and a file named F4C60000.OSR will be stored in your directory.

Installation: LEARNING THE MRPMS SYSTEM				ORGANIZATIONAL SUMMARY REPORT							29/01/90		
Installation Totals				F4C 6000000 to 6999999									
				All Facilities									
Number of Facilities:				2									
Total Square Footage:				109117									
Costs in Dollars													
Year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995			
R.M.F.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00			
A.R.M.	142943.30	142943.30	142943.30	142943.30	142943.30	142943.30	142943.30	142943.30	142943.30	142943.30			
M.R.T.	137191.30	190073.80	114602.50	99289.05	156577.70	121029.60	112967.90	171460.20	116425.00	101809.00			
Totals	280134.60	333017.10	257545.80	242232.30	299520.90	263972.80	255911.20	314403.50	259368.30	244752.20			
Total dollars for all years				2750859.00									

Figure 3.2.1.5.1-2 Summary report - F4C.

3.2.1.5.1.1 Current Use Summary (AMS) Organizational Summary Report.

```

=====
a               AMS/F4C Summary Report
a               Input Screen
a
a=====
a=====
a
a               AMS Summary Report      [toggle space bar to change]
a
a               Enter the low  AMS Code: K2600
a               Enter the high AMS Code: K2600
a
a               Enter the low  Facility ID:      (Enter blanks to
a               Enter the high Facility ID:      print all facilities)
a
a               Enter the starting year: 1986
a               Enter the number of years to report: 10 (max 10)
a
a               Actual Unit      [toggle space bar to change]
a               Print to BOTH    [toggle space bar to change]
a               Enter Filename   K2600.OSR
a
a
a=====
F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT

```

Figure 3.2.1.5.1-3 AMS/F4C Summary report input screen - AMS.

- | | |
|---|--|
| 1. (Enter) (to accept AMS Summary Report) | 9. (Enter) (to accept 10 as the number of years to report) |
| 2. Type: K2600 | 10. (Enter) (to accept actual units) |
| 3. (Enter) | 11. (Enter) (to accept print to both) |
| 4. Type: K2600 | 12. Type: K2600 |
| 5. (Enter) | 13. (Enter) |
| 6. (Enter) (Facility IDs of 00000000 to ZZZZZZZZ will include all facilities) | 14. (F6 BEGIN) Report will be printed on your printer and a file named K2600.OSR will be stored in your directory. |
| 7. (Enter) | |
| 8. (Enter) (to accept 1986 starting year) | 15. (F10) (for Facility Reports). |

Installation: LEARNING THE MRPMS SYSTEM
Installation Totals

ORGANIZATIONAL SUMMARY REPORT

AMS K2600 to K2600
All Facilities

29/01/90

Number of Facilities: 2
Total Square Footage: 109117

Costs in Dollars

Year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
R.M.F.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
A.R.M.	142943.30	142943.30	142943.30	142943.30	142943.30	142943.30	142943.30	142943.30	142943.30	142943.30
M.R.T.	137191.30	190073.80	114602.50	99289.05	156577.70	121029.60	112967.90	171460.20	116425.00	101809.00
Totals	280134.60	333017.10	257545.80	242232.30	299520.90	263972.80	255911.20	314403.50	259368.30	244752.20
Total dollars for all years	2750859.00									

Figure 3.2.1.5.1-4 Organizational summary report - AMS.

3.2.1.5.2 Facility Totals Report. (read 2.3.5.2, page 2-25) - Produce a three-digit current use code 10-year report of total costs for all facilities (6000000 - 6999999) starting in 1986. Print to the printer and save in a file.

Commands. From the Facility Reports Selection Menu:

1. (↓) (to Facility Totals Report)
2. (Enter) (for input screen)
3. Type: 2 (for F4C range)
4. (Enter)
5. (F6 BEGIN) (for input screen)
6. Type: 6000000 (Low F4C)
7. (Enter)
8. Type: 6999999 (High F4C)
9. (Enter)
10. Type: 1986
11. (Enter)
12. Type: 10
13. (Enter)
14. (F6 BEGIN) (for input screen)

```

#####
          FACILITY TOTALS REPORT
#####
          INPUT SCREEN
          1) ENTER THE FACILITY ID
          2) ENTER THE F4C CODE

          CHOOSE OPTION 1 OR 2: 2
#####
F1      F2      F3      F4      F5      F6      F7      F8      F9      F10EXIT

```

Figure 3.2.1.5.2-1 Facility totals report - screen 1.

```

#####
          FACILITY TOTALS REPORT
#####
          INPUT SCREEN
          ENTER LOW F4C CODE      :6000000
          ENTER HIGH F4C CODE     :6999999

          ENTER THE STARTING YEAR:1986
          ENTER NUMBER OF YEARS TO REPORT(MAX 10): 10
#####
F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT

```

Figure 3.2.1.5.2-2 Facility totals report - screen 2.

```

*****
FACILITY TOTALS REPORT
*****
      INPUT SCREEN
      PRINT IN DOLLARS(D),
      OR THOUSANDS DOLLARS(T): T
      REPORT CONTENTS      : 3
      1-INDIVIDUAL FACILITIES
      2-INDIVIDUAL FACILITIES PER SQ. FOOT
      3-3 DIGIT F4C SUMMARY
      4-3 DIGIT F4C SUMMARY PER SQUARE FOOT
      PRINT OPTIONS      : 3
      1-PRINTER
      2-FILE NAMED:
      3-PRINTER & FILE NAMED: F4C60000.FTR
      PRINT TOTAL OPTIONS : 1
      1-PRINT WITH TOTALS
      2-PRINT TOTALS ONLY
*****
      Print in Thousand Dollars
F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT

```

Figure 3.2.1.5.2-3 Facility totals report - screen 3.

15. Type: T (for thousands)
16. (Enter)
17. Type: 3 (3-digit F4C Summary)
18. (Enter)
19. Type: 3 (for both)
20. (Enter)
21. Type: F4C60000
22. (Enter)
23. Type: 1 (for Print w/Totals)
24. (Enter)
25. (F6 BEGIN)
26. Type: N (for RMF)
27. (Enter)
28. Type: N (for ARM)
29. (Enter)
30. Type: N (for MRT)
31. (Enter)
32. Type: Y (for Totals)
33. (Enter)
34. (F6 BEGIN) (produces report and saves the file as F4C60000.OSR in your current
35. (F10) (for Facility Reports Menu)


```

#####
# FACILITY TOTALS REPORT #
#####

```

```

#####
# Select Reports to Print(Y/N) #
# 1. RMF COST N #
# 2. ARM COST N #
# 3. MRT COST N #
# 4. TOTAL COST Y #
# #
#####

```

F1 F2 F3 F4 F5 F6BEGIN F7 F8 F9 F10EXIT

Figure 3.2.1.5.2-4 Facility totals report - screen 4.

```

12/18/89 11:07:51
INSTALLATION: LEARNING THE MRP/MS SYSTEM
Start FAC: 6000000 End FAC: 6999999
Single FAC: 1986 ... 1987 ... 1988 ... 1989 ... 1990 ... 1991 ... 1992 ... 1993 ... 1994 ... 1995 ...
TOTAL: 280.13 313.02 257.55 242.23 299.52 263.97 255.91 316.40 259.37 246.75

```

Costs in thousands

Page

Figure 3.2.1.5.2-5 Facility totals report - screen 5.

3.2.1.5.3 URR Reports. Ten Unconstrained Requirements Reports (URR) have been generated by hand for bachelor housing facilities (K2600). The square footage in thousands and dollars in thousands are as follows:

<u>Year</u>	<u>Footage (KSF)</u>	<u>KS</u>	<u>Year</u>	<u>Footage (KSF)</u>	<u>KS</u>
1986	98	330	1991	98	420
1987	98	90	1992	98	420
1988	98	390	1993	98	430
1989	98	410	1994	98	430
1990	98	410	1995	98	440

Enter the hand calculated values. Produce a URR report for bachelor housing facilities (K2600). Produce a URR comparison report and review the data produced in the report.

Commands.

1. Enter Hand Calculated Values. From the Facility Reports Selection Menu:

1. (↓) twice (to URR Report)
2. (Enter) (to URR Reports Selection Menu)
3. (Enter) (for URR Editor)

```

#####
|      UNCONSTRAINED REQRMNTS REPORTS      |
|      SELECTION MENU                      *|
|#####|
|
|      URR Editor
|
|      Escalation Factor Editor
|
|      Produce Report's
|
|
|
|
|
|
|C:\DATA\LEARN
|#####
F1      F2      F3      F4      F5      F6      F7      F8      F9      F10EXIT

```

Figure 3.2.1.5.3-1 Unconstrained requirements report selection menu.

```

=====
EDIT URR                                01/29/90
=====
AMS: [K2600]  ADMINISTRATION
COMMAND MODE
=====
Year      URR KSF      URR K$
1986      98.0      330.0
1987      98.0      390.0
1988      98.0      390.0
1989      98.0      410.0
1990      98.0      410.0
1991      98.0      420.0
1992      98.0      420.0
1993      98.0      430.0
1994      98.0      430.0
1995      98.0      430.0
=====
F1 TOP  F2 BOT  F3 FIND  F4 LIST  F5 EDIT  F6 RISE  F7 ADD  F8 DEL  F9
F10EXIT

```

Figure 3.2.1.5.3-2 Edit URR.

4. (F5 EDIT) (to edit the K2600 URR figures)
5. (Enter) (Type the new URR figures given above)
6. Type: 98; press (↓) 9 times
7. When back to the 1986 row, press enter key for URR K\$ column
8. Type: 330; then (↓); enter 9 other values
9. (F9 SAVE)
10. (F10) (to URR Comparison Report Selection Menu)

Note: If the URR values have been already entered into another computer system, a transfer file in the format shown in Chapter 2 can be generated in the other computer system and copied into this directory. Pressing the F9 RISE key will retrieve this information into the MRPMSS file.

2. Enter Cost Escalation Factors. The following cost escalation factors have been approved for the Operations and Maintenance, Army (OMA) appropriation:

<u>Year</u>	<u>Factor</u>
1986	1.00
1987	1.03
1988	1.06
1989	1.09
1990	1.11
1991	1.13
1992	1.15
1993	1.18
1994	1.22
1995	1.25

Enter the factors under the correct appropriation.

1. (↓) (to Escalation Factor Editor)
2. (Enter) (to Escalation Factor Editor)
3. (Space bar) three times (to the OMA appropriation)
4. (F5 Edit)
5. Enter the ten cost escalation factors
6. (F9 Save)
7. (F10 Exit) (to URR Selection Menu).

[illegible]

1. Produce a Constant Dollar URR Report. From the URR Report Selection Menu:

1. (↓) twice (to Produce URR Reports)
2. Enter) (to URR Comparison Report and Basic Report)

```

#####
      URR Comparison Report & Basic Report
#####
      URR Report                      [toggle space bar to chnage]
      Enter the low AMS Code: K2600
      Enter the high AMS Code: K2600
      Enter the low Facility ID:      (Enter blanks to
      Enter the high Facility ID:    print all facilities)
      Enter the starting year: 1986
      Enter the number of years to report: 10(max 10)
      Select One:      4
                      (1) RMF  (2) ARM
                      (3) MRT  (4) TOTAL
      Print to BOTH    [toggle space bar to change]
      Enter Filename   K2600.URR
#####
F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT

```

Figure 3.2.1.5.3-4 URR Comparison report input screen (URR report).

3. (Space bar) (to display "URR Report [Constant]")
4. (Enter)
5. Type: K2600 (low AMS)
6. (Enter)
7. Type: K2600 (high AMS)
8. (Enter) three times (to include all facilities)
9. Type: 1986 (starting year)
10. (Enter)
11. Type: 10 (years to report)
12. (Enter)
13. Type: 4 (total)
14. 5(Enter)
15. (Space bar) (to both print and file option)
16. (Enter)
17. Type: K2600 (file name; you should name your file according to its contents)
18. (Enter)
19. (F6 BEGIN) (System will produce the following report and store the file as K2600.URR in your current directory).

URR REPORT (Constant) (TOTAL)											
ORGANIZATION: LEARNING THE MRPMS SYSTEM						from 000000000 to ZZZZZZZZZ					Page 1
											Date 01-29-90
AMS ID = K2600 ADMINISTRATION											
YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
IFS KSF	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	
MRPM k\$	280.1	333.0	257.5	242.2	299.5	264.0	255.9	314.4	259.4	244.8	
AMS ID = K2000 Summary (not include Family Housing)											
YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
IFS KSF	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	
MRPM k\$	280.1	333.0	257.5	242.2	299.5	264.0	255.9	314.4	259.4	244.8	

Figure 3.2.1.5.3-5 URR Report (total).

2. Produce URR Comparison Report. From the URR Comparison Report and Basic Report Screen:

```

*****
* URR Comparison Report & Basic Report *
*****
*
* URR Comparison Report [toggle space bar to change]
*
* Enter the low AMS Code: K2600
* Enter the high AMS Code: K2600
*
* Enter the low Facility ID: (Enter blanks to
* Enter the high Facility ID: print all facilities)
*
* Enter the starting year: 1986
* Enter the number of years to report: 10(max 10)
*
* Select One: 4
* (1) RMF (2) ARM
* (3) MRT (4) TOTAL
*
* Print to BOTH [toggle space bar to change]
* Enter Filename K2600.OCR
*****
F1 F2 F3 F4 F5 F6BEGIN F7 F8 F9 F10EXIT

```

Figure 3.2.1.5.3-6 URR Comparison report input screen (URR comparison).

1. (Enter) (for URR Comparison Report; values used in the previous report will be shown as default values)
2. Type: K2600
3. (Enter)
4. Type: K2600

5. Press (Enter) three times (to include all facilities 0000000 - ZZZZZZZ)
6. Type: 1986
7. (Enter)
8. Type: 10
9. (Enter)
10. Type: 4
11. (Enter)
12. Space bar twice (to both print and file option)
13. (Enter)
14. Type: K2600
15. (Enter)
16. (F6 BEGIN) (System will produce the following report and store the file named K2600.OCR in your current directory)

URR COMPARISON REPORT (TOTAL)										
ORGANIZATION: LEARNING THE MAPSS SYSTEM										Page 1 Date 12-18-89
ANS ID = K2600	ADMINISTRATION									
YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
I/S KSF	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1
URR KSF	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
% Difference	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3
MRPH LS	280.1	333.0	257.5	242.2	299.5	264.0	255.9	314.4	259.4	244.8
% Difference	84.9	100.9	78.0	73.4	90.8	80.0	77.5	95.1	78.6	74.2
INST URR LS	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
MRPH URR LS	251.4	299.1	231.3	217.6	269.0	237.1	229.8	282.4	232.9	219.8
% Difference	76.2	90.6	70.1	65.9	81.5	71.8	69.6	85.6	70.6	66.6
ANS ID = K2000	Summary (not include family housing)									
YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
I/S KSF	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1
URR KSF	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
% Difference	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3	111.3
MRPH LS	280.1	333.0	257.5	242.2	299.5	264.0	255.9	314.4	259.4	244.8
% Difference	84.9	100.9	78.0	73.4	90.8	80.0	77.5	95.1	78.6	74.2
INST URR LS	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
MRPH URR LS	251.4	299.1	231.3	217.6	269.0	237.1	229.8	282.4	232.9	219.8
% Difference	76.2	90.6	70.1	65.9	81.5	71.8	69.6	85.6	70.6	66.6

Figure 3.2.1.5.3-7 URR Comparison report (total).

17. (F10) (to URR Comparison Report Selection Menu)
18. (F10) (to Facility Reports Selection Menu)

3. Produce an Actual Dollar URR Report. From the URR Report Selection Menu:

1. (↓) twice (to Produce URR Reports)
2. (Enter) (to URR Comparison Report and Basic Report)

```

#####
      URR Comparison Report & Basic Report
#####
      URR Report (Actual)      [toggle space bar to change]
      Enter the low AMS Code: K2600
      Enter the high AMS Code: K2600
      Enter the low Facility ID: A00000000 (Enter blanks to
      Enter the high Facility ID: BZZZZZZZZ print all facilities)
      Enter the starting year: 1986
      Enter the number of years to report: 10(max 10)
      Select One: 4
      (1) RMF (2) ARM
      (3) MRT (4) TOTAL
      Print to BOTH      [toggle space bar to change]
      Enter Filename K2600.URA
#####
F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT

```

Figure 3.2.1.5.3-8 URR Comparison report input screen.

3. (Space bar) twice (to display "URR Report [Actual]")
4. (Enter)
5. Type: K2600 (low AMS)
6. (Enter)
7. Type: K2600 (high AMS)
8. (Enter)
9. Type: A00000000 (for first OMA facility group)
10. (Enter)
11. Type: BZZZZZZZZ (for last OMA facility group)
12. (Enter)
13. Type: 1986 (starting year)
14. (Enter)
15. Type: 10 (years to report)
16. (Enter)
17. Type: 4 (total)
18. (Enter)
19. Press space bar to both print and file option.
20. (Enter)
21. Type: K2600 (file name; you should name your file according to its contents)
22. (Enter)
23. (F6 BEGIN) (System will produce the following report and store the file as K2600.URR in your current directory)

URR REPORT (Actual) (TOTAL)

ORGANIZATION: LEARNING THE MRPSS SYSTEM
Operations Maintenance, Army (OMA)

from A00000000 to BZZZZZZZZ

Page 1
Date 01-23-90

AMS ID = K2600 ADMINISTRATION

YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
IFS KSF	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1
MRPM k\$	280.1	343.0	273.0	264.0	332.5	298.3	294.3	371.0	316.4	305.9

AMS ID = K2000 Summary (not include Family Housing)

YEAR	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
IFS KSF	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1
MRPM k\$	280.1	343.0	273.0	264.0	332.5	298.3	294.3	371.0	316.4	305.9

Figure 3.2.1.5.3-9 URR Report (actual).

3.2.1.5.4 View and Print Report Files. Now review the reports that you have created and stored in files, for example, the current use (AMS) organizational summary report (OSR).

Commands. From the Facility Reports Selection Menu:

1. (↓) three times (to View and Print Report Files)
2. (Enter) (to View and Print Report Files)
3. (Enter) (to select the organizational summary reports [OSR] reports)
4. (F6) (to view)
5. Follow instructions (F6) to review the report
6. Press X to exit.
7. (F10) (to view and print report files)
8. (F10) (to Facility Reports Selection Menu)
9. (F10) (to Facility Information Selection Menu)

```

#####
VIEW & PRINT REPORT FILES
#####
CHOOSE THE TYPE OF REPORT FILES: 1

1: Organizational Summary Reports
2: Facility Total Reports
3: Unconstrained Requirements Reports (constant)
4: Unconstrained Requirements Reports (actual)
5: URR Comparison Reports

#####
F1      F2      F3      F4      F5      F6BEGIN F7      F8      F9      F10EXIT

```

Figure 3.2.1.5.4-1 View and print report files - selection menu.

```

#####
VIEW & PRINT REPORT FILES
#####
Input the File Name of
Organizational Summary Report

#####
F4C60000 K2600
#####
F1      F2      F3      F4PRINT F5      F6 VIEW F7      F8 DEL  F9      F10EXIT

```

Figure 3.2.1.5.4-2 View and print report files - OSR listing.

3.2.1.6 Delete Resource Total File. (Read 2.3.6, page 2-29) - When you have finished with all reports and want to free your disk space for other uses, delete the resource total file with this command.

3.3 Basic Information Selection Menu. (Read 2.2, page 2-2)

3.3.1 General Information

3.3.1.1 Organization Chart. (read 2.2.1.1, page 2-3) - This is basically an unchanging table once you have added the installations that report under or through your installation and the directories containing your facility tables. Add a new organization no. (180), organization code (XX), description (Learn), and MACOM ID 00.

Commands. From the Maintenance Prediction Model Main Menu:

- | | |
|---|--|
| 1. Enter. (for Basic Information Selection Menu) | 7. Type: XX |
| 2. (Enter) (for General Information Selection Menu) | 8. (Tab) (Inst. ID) |
| 3. (Enter) (for Organization chart) | 9. (Tab) (Org Description) |
| 4. (F7 Add) | 10. Type: Learn |
| 5. Type: 180 | 11. Tab (MACOM ID) |
| 6. (Tab) | 12. Type: 00 |
| | 13. (F9 Save) |
| | 14. (F10 Exit) (to go back to General Information Selection Menu). |

3.3.1.2 RMF Factors. (read 2.2.1.2, page 2-5) - This table will probably change once every 3 years when the Army calculates and publishes a new set of RMF factors for your installation. Updates will be provided as a completely new file. For practice FIND the AMS code for Family Housing K2910. EDIT the default value to \$2.03. EDIT this record again and change the third year to \$5.03 and SAVE.

Commands. From the General Information Selection Menu:

- | | |
|--|--|
| 1. (↓) (to RMF Factors) | 8. Type: 2.03 (default value) |
| 2. (Enter) (for RMF [OCE] Factor File) | 9. (enter) (system will change all years to 2.03) |
| 3. (F3 Find) | 10. (↓) |
| 4. Type: K2910 | 11. (↓) |
| 5. (enter) (to find the AMS Code) | 12. Type: 5.03 (year 3) |
| 6. (F5 Edit) | 13. (Enter) |
| 7. (↓) twice | 14. (F9 Save) |
| | 15. (F10) (to return to General Information Selection Menu). |

3.3.1.3 FAC to AMS Conversion Codes. (read 2.2.1.3, page 2-6) - This table will change very little and will require no updating of individual records. Updates will be provided as a completely new file.

Commands. From the General Information Selection Menu:

1. (↓) twice (to F4C Conversion Codes)
2. (Enter) (for F4C to AMS Conversion Table)
3. (Review table using Page up and Page down keys)
4. (F10) (for General Information Menu).

3.3.1.4 Report Periods. (read 2.2.1.4, page 2-7) - The report dates in this table will be changed once a year. For practice only, EDIT this table and set the beginning report period year to 1987, the ending report period year to 1996. Look up the correct material adjustment factor for your general area in Table 5.2 of the user's manual; but enter 1.0 for this example. Change the organization code to (Y1). Change the number of lines on a printed page to 66. Enter blanks for no virtual drive available.

Commands. From the General Information Selection Menu:

- | | |
|--|--|
| 1. (↓) three times (to Report Periods) | |
| 2. (Enter) (for Report Period Data) | 9. Type 1.6 (Material Time Adjustment) |
| 3. (F5 Edit) | 10. (Enter) |
| 4. (↓) (Advance report period 1 yr) | 11. Type: 1.0 (RMF Time Adjustment) |
| 5. Type: Y | 12. (Enter) |
| 6. (Enter) (System automatically
advances year by 1 year) | 13. Type: Y1 |
| 7. Type: 1.0 (Material Location and
Adjustment) | 14. (Enter) |
| 8. (Enter) | 15. Type: 66 |
| | 16. (Enter) |
| | 17. (Space bar) |
| | 18. (F10) (DO NOT SAVE). |

3.3.1.5 Unit Cost Factors. (read 2.2.1.5, page 2-8)

This table will be updated by DA. You will not have to change data in this table. Review the data for the Unit Cost Factors stored in ID AA.

Commands. From the General Information Selection Menu:

1. (↓) four times (to Unit Cost Factors)
2. (Enter)
3. Use (↓)(↑) to review this data.
4. (F10) (to General Information Selection Menu)
5. (F10) (to Basic Information Selection Menu).

3.3.2 Facility Resource Description Data. (read 2.2.2, page 2-9)

Research has just been completed on Community Facilities for Personnel Support and Services, F4C 23000 Series facilities. The research has shown that large improvements in resource prediction accuracy can be made by using the new information over the general building information currently being used.

3.3.2.1 F4C Resource Description Table. (read 2.2.2.1, page 2-9) - This table does not need to be edited by installations.

3.3.2.2 Trade and Costs. (NOT USED IN CURRENT VERSION) (read 2.2.2.2, page 2-11) - EDIT the Carpenter Rates and change the In-House Labor Rate to \$19.75 per hour and SAVE.

Commands. From Basic Information Selection Menu:

1. (↓) (to Facility Resource Data)
2. (Enter) (for Facility Resource Data)
3. (↓) (to Trade and Costs)
4. (Enter) (for Trade and Cost)
5. (F5 Edit)
6. (↓) twice (to in-house labor)
7. Type: 19.75
8. (Enter)
9. (F9 Save)
10. (F10) (for Facility Resource Data Selection Menu).

3.3.2.3 Total/Partial Summary Tasks. (NOT USED IN CURRENT VERSION) (read 2.2.2.3, page 2-12) - The two tables: (1) total task summary table and (2) partial task summary table would normally be created by a DA support agency and would require no installation editing.

4. TABLES.

Table 4.1 Continental U.S. (CONUS) Installations Area Cost Factor Indexes*

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Alabama	State Average	0.86
	Birmingham	0.96
	Mobile	0.86
	Montgomery	0.76
	Anniston Army Depot	0.81
	Huntsville	0.88
	Fort McClellan	0.80
	Redstone Arsenal	0.88
	Fort Rucker	0.80
Alaska	State Average	2.25
	Anchorage	1.92
	Delta Junction	2.70
	Fairbanks	2.13
	Adak	3.88
	Aleutian Islands	3.86
	Anchorage NSGA	1.92
	Barrow	4.18
	Burnt Mtn.	6.86
	Clear	3.10
	Eielson AFB	2.13
	Elmendorf AFB	1.92
	Galena	3.73
	Fort Greely	2.70
	Fort Richardson	1.92
	Fort Wainwright	2.13
Arizona	State Average	1.02
	Flagstaff	1.02
	Phoenix	0.99
	Tucson	1.05
	Fort Huachuca	1.22
	Yuma Proving Ground	1.31
	Yuma	1.31
Arkansas	State Average	0.89
	Pine Bluff	0.93
	Little Rock	0.83
	Fort Smith	0.92
	Fort Chaffee	0.92
	Pine Bluff Arsenal	0.93

*(Copied from EIRS Bulletin 86-03, 30 June 86; update to AR 415-17 for FY88-89 Programs)

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
California	State Average	1.21
	Los Angeles	1.20
	San Diego	1.18
	Beale	1.28
	Bridgeport NWTC	1.27
	Castle	1.13
	Centerville Beach	1.32
	Desert Area	1.18
	Edwards AFB	1.30
	El Centro	1.27
	George AFB	1.31
	Fort Hunter Liggett	1.29
	Fort Irwin	1.20
	Le Moore NAS	1.20
	March AFB	1.18
	Mather AFB	1.17
	McClellan AFB	1.17
	Monterey Area	1.23
	Presidio of Monterey	1.23
	Norton AFB	1.16
	Oakland Army Base	1.33
	Fort Ord	1.24
	Hueneme Area	1.20
	Riverside	1.18
	Sacramento	1.15
	Sacramento Army Depot	1.15
	Presidio of San Francisco	1.25
	San Nicholas Island	2.59
	Sharpe Army Depot	1.13
	Sierra Army Depot	1.33
	Stockton	1.15
	Travis AFB	1.27
	Vandenberg AFB	1.38
Colorado	State Average	0.98
	Colorado Springs	0.94
	Denver	1.04
	Pueblo	0.96
	Fort Carson	1.01
	Fitzsimmons AMC	1.06
	Pueblo Army Depot	0.96
	Peterson AFB	0.94
	Rocky Mountain Arsenal	1.06

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Connecticut	State Average	1.13
	Bridgeport	1.16
	Hartford	1.10
	New London	1.14
Delaware	State Average	0.99
	Dover	1.04
	Lewes	0.98
	Milford	0.96
	Lewes NF	1.04
	Dover AFB	1.04
District of Columbia	Washington	1.03
	Fort McNair	1.03
	Walter Reed AMC	1.03
Florida	State Average	0.89
	Miami	0.95
	Panama City	0.92
	Tampa	0.79
	Cape Canaveral	0.96
	Cape Kennedy	0.96
	Gulf Coast	0.85
	Homestead AFB	0.88
	Homestead	0.88
	Jacksonville Area	0.85
	Key West NAS	1.08
	Orlando	0.80
	Pensacola Area	0.85
	McDill AFB	0.77
	Eglin AFB	0.77
	Tyndall AFB	0.92
Georgia	State Average	0.80
	Albany	0.82
	Atlanta	0.87
	Macon	0.70
	Athens	0.90
	Atlanta-Marietta	0.93
	Fort Benning	0.71

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Georgia (Cont d)	Columbus	0.71
	Fort Gillem	0.87
	Fort Gordon	0.94
	Kings Bay	0.93
	Fort McPherson	0.87
	Fort Stewart	0.84
Hawaii	State Average	1.28
	Hawaii	1.29
	Honolulu	1.27
	Maui	1.29
	Alimanu	1.27
	Barbars Point NAS	1.34
	Fort Debussy	1.27
	EWA Beach Area	1.34
	Helemano	1.34
	Hickam Army Air Field	1.27
	Kaneohe MCAS	1.34
	Moanalua	1.27
	Pearl City	1.27
	Pearl Harbor	1.27
	Pohakuloa	1.32
	Schofield Barracks	1.27
	Fort Shafter	1.27
	Tripler AMC	1.27
	Wheeler Army Air Field	1.34
Idaho	State Average	1.11
	Boise	1.05
	Idaho Falls	1.08
	Mountain Home	1.19
	Mountain Home AFB	1.20
Illinois	State Average	1.03
	Belleville	0.96
	Chicago	1.09
	Rock Island	1.03
	Rock Island Arsenal	1.06
	St. Louis Support Ctr	0.96
	Savannah Army Depot	1.05

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Illinois (Cont'd)	Scott AFB	1.03
	Fort Sheridan	1.10
Indiana	State Average	0.99
	Indianapolis	1.03
	Logansport	0.99
	Madison	0.94
	Fort Benjamin Harrison	1.07
	Crane	1.10
	Crane AAP	1.10
	Grissom AFB	1.06
	Indiana AAP	1.02
	Jefferson Proving Ground	0.94
Iowa	State Average	1.02
	Burlington	1.04
	Cedar Rapids	0.98
	Des Moines	1.05
Kansas	State Average	0.94
	Manhattan	0.97
	Topeka	0.96
	Wichita	0.88
	Kansas AAP	0.94
	Fort Leavenworth	0.94
	Fort Riley	0.97
	Sunflower AAP	0.97
Kentucky	State Average	0.96
	Bowling Green	0.99
	Lexington	0.96
	Louisville	0.93
	Fort Campbell	0.93
	Fort Knox	0.99
	Lexington/Bluegrass Army Depot	1.06
	Louisville NAS	0.93
Louisiana	State Average	0.02
	Alexandria	0.87
	New Orleans	0.94
	Shreveport	0.94
	Barksdale AFB	0.94
	England AFB	0.87

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Louisiana (Cont'd)	Gulf Outport New Orleans	0.94
	Louisiana AAP	0.94
	Fort Polk	0.94
Maine	State Average	0.93
	Bangor	0.85
	Caribou	0.99
	Portland	0.94
	Brunswick	0.93
	Cutler	0.98
	Northern Area	1.17
	Winter Harbor	0.98
Maryland	State Average	0.97
	Baltimore	0.95
	Fredrick	0.94
	Lexington Park	1.01
	Aberdeen Proving Ground	0.94
	Annapolis	1.03
	Fort Detrick	0.94
	Harry Diamond Lab	1.00
	Fort Meade	0.95
	Patuxent River Area	1.08
Massachusetts	Fort Ritchie	0.90
	State Average	1.10
	Boston	1.13
	Fitchburg	1.08
	Springfield	1.08
	Army Mtls & Mech Research Ctr	1.13
	Fort Devens	1.15
	Natick Research & Development Ctr	1.13
	South Weymouth	1.13
Michigan	State Average	1.06
	Bay City	1.02
	Detroit	1.14
	Marquette	1.03
	Detroit Arsenal	1.14
	Northern Area	1.25
	Republic (Elfcom)	1.10
	Selfridge AFB	1.14

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Minnesota	State Average	1.08
	Duluth	1.05
	Minneapolis	1.09
	St. Cloud	1.10
	Twin Cities AAP	1.09
Mississippi	State Average	0.84
	Biloxi	0.87
	Columbus	0.81
	Jackson	0.84
	Columbus AFB	0.81
	Gulfport Area	0.87
	Meridian	0.92
Missouri	State Average	0.92
	Kansas City	0.92
	St. Louis	0.99
	Rolla	0.85
	Lake City AAP	0.93
	Fort Leonard Wood	0.91
Montana	State Average	1.15
	Billings	1.15
	Butte	1.18
	Great Falls	1.12
	Malmstrom AFB	1.12
Nebraska	State Average	1.03
	Grand Island	1.00
	Lincoln	1.05
	Omaha	1.05
	Offutt AFB	1.05
Nevada	State Average	1.18
	Hawthorne	1.26
	Las Vegas	1.13
	Reno	1.15
	Fallon	1.28
	Hawthorne AAP	1.26
	Nellis AFB	1.13
New Hampshire	State Average	1.09
	Concord	1.06
	Nashua	1.06

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
New Hampshire (Cont'd)	Portsmouth	1.14
	Cold Regions Research Lab	1.17
New Jersey	State Average	1.08
	Newark	1.11
	Red Bank	1.08
	Trenton	1.06
	Bayonne	1.10
	Bayonne Mil Ocean Term	1.09
	Fort Dix	1.03
	Earle	1.10
	Lakehurst	1.05
	Fort Monmouth	1.09
	Picatinny Arsenal	1.20
New Mexico	State Average	1.03
	Alamogordo	0.99
	Albuquerque	1.03
	Gallup	1.06
	Holloman AFB	1.05
	Kirtland AFB	1.03
	White Sands Missile Range	1.09
	Fort Wingate	1.06
New York	State Average	1.12
	Albany	1.07
	New York City	1.24
	Syracuse	1.05
	Brooklyn	1.24
	Fort Drum	1.18
	Fort Hamilton	1.24
	Seneca Army Depot	1.15
	U.S. Military Academy	1.17
	Watervliet Arsenal	1.07
North Carolina	State Average	0.76
	Fayetteville	0.76
	Greensboro	0.75
	Wilmington	0.78
	Fort Bragg	0.76
	Camp Lejeune Area	0.86
	Cherry Point	0.86
	Goldsboro	0.77
	Pope AFB	0.82

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
North Carolina (Cont'd)	Seymour AFB	0.77
	Sunny Point Mil Ocean Term	0.78
North Dakota	State Average	1.03
	Bismarck	1.02
	Grand Forks	0.98
	Minot	1.10
	Grand Forks AFB	0.98
	Stanley R. Hicklesen CPX	1.03
	Minot AFB	1.12
Ohio	State Average	1.00
	Columbus	1.03
	Dayton	0.98
	Youngstown	0.99
	Cleveland	1.14
	Wright-Patterson AFB	0.98
Oklahoma	State Average	0.93
	Lawton	0.90
	McAlester	0.91
	Oklahoma City	0.98
	Altus AFB	0.94
	Enid	1.01
	McAlester AAP	0.91
	Fort Sill	0.90
Oregon	State Average	1.05
	Pendleton	1.08
	Portland	1.07
	Salem	0.99
	Charleston	1.11
	Coos Head	1.08
	Umatilla Army Depot	1.18
Pennsylvania	State Average	1.00
	Harrisburg	0.91
	Philadelphia	1.05
	Pittsburgh	1.04
	Carlisle Barracks	0.93
	New Cumberland Army Depot	0.91
	Fort Indiantown Gap	1.07
	Letterkenny Army Depot	1.07

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Pennsylvania (Cont'd)	Mechanicsburg Area	0.91
	Tobyhanna Army Depot	1.14
	Warminster Area	1.04
Rhode Island	State Average	1.11
	Bristol	1.13
	Newport	1.11
	Providence	1.10
	Davisville	1.17
South Carolina	State Average	0.82
	Charleston	0.81
	Columbia	0.82
	Myrtle Beach	0.84
	Beaufort Area	0.89
	Charleston AFB	0.81
	Fort Jackson	0.82
	Sumter	0.80
South Dakota	State Average	0.95
	Aberdeen	0.95
	Sioux Falls	0.94
	Rapid City	0.96
	Ellsworth AFB	0.98
Tennessee	State Average	0.84
	Chattanooga	0.86
	Kingsport	0.72
	Memphis	0.95
	Arnold AFB	0.90
	Milan AAP	0.98
	Holston AAP	0.71
Texas	State Average	0.85
	San Angelo	0.76
	San Antonio	0.86
	Fort Worth	0.93
	Fort Bliss	0.96
	Carswell AFB	0.93
	Chase Field - Beeville	0.97
	Corpus Christi Army Depot	0.92
	Corpus Christi	0.92
	Dallas	0.93
	Dyess AFB	0.94
	Fort Hood	0.89

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Texas (Cont'd)	Kingsville	0.99
	Red River Army Depot	0.78
	Fort Sam Houston	0.85
	William Beaumont AMC	0.96
	Bergstrom AFB	0.95
	Brooks AFB	0.86
	Randolph AFB	0.86
	Kelly AFB	0.86
	Lackland AFB	0.86
Utah	State Average	1.03
	Ogden	1.05
	Salt Lake City	1.00
	Tooele	1.06
	Dugway Proving Ground	1.03
	Hill AFB	1.07
	Tooele Army Depot	1.05
Vermont	State Average	0.99
	Burlington	1.00
	Montpelier	1.00
	Rutland	0.96
Virginia	State Average	0.95
	Norfolk	0.95
	Radford	0.95
	Richmond	0.94
	Arlington	1.04
	Arlington Hall Station	1.04
	Arlington National Cemetery	1.04
	Fort Belvoir	1.04
	Cameron Station	1.04
	Dahlgren	1.10
	Fort Eustis	0.96
	Humphreys Engineer Center	1.03
	Fort A.P. Hill	0.92
	Fort Lee	0.93
	Fort Monroe	0.94
	Fort Myer	1.03
	Norfolk-Newport News Area	0.95
	Fort Pickett	0.98
	Quantico	1.03
	Nadford AAP	1.02
	Port Story	0.95
	Vint Hill Farms Station	1.08

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Texas (Cont'd)	Kingsville	0.99
	Red River Army Depot	0.78
	Fort Sam Houston	0.86
	William Beaumont AMC	0.96
	Bergstrom AFB	0.95
	Brooks AFB	0.86
	Randolph AFB	0.86
	Kelly AFB	0.86
	Lackland AFB	0.86
Utah	State Average	1.03
	Ogden	1.05
	Salt Lake City	1.00
	Tooele	1.06
	Dugway Proving Ground	1.03
	Hill AFB	1.07
	Tooele Army Depot	1.05
Vermont	State Average	0.99
	Burlington	1.00
	Montpelier	1.00
	Rutland	0.96
Virginia	State Average	0.95
	Norfolk	0.95
	Radford	0.95
	Richmond	0.94
	Arlington	1.04
	Arlington Hall Station	1.04
	Arlington National Cemetery	1.04
	Fort Belvoir	1.04
	Cameron Station	1.04
	Dahlgren	1.10
	Fort Eustis	0.96
	Humphreys Engineer Center	1.03
	Fort A.P. Hill	0.92
	Fort Lee	0.93
	Fort Monroe	0.94
	Fort Myer	1.03
	Norfolk-Newport News Area	0.95
	Fort Pickett	0.98
	Quantico	1.03
	Nadford AAP	1.02
	Port Story	0.95
	Vint Hill Farms Station	1.08

Table 4.1 (Cont'd)

<u>State</u>	<u>Location</u>	<u>ACF Index</u>
Washington	State Average	1.09
	Spokane	1.08
	Tacoma	1.07
	Yakima	1.11
	Fairchild AFB	1.13
	Jim Creek	1.34
	Fort Lewis	1.07
	Pacific Beach	1.27
	Puget Sound Area	1.15
	Seattle Area	1.12
	Widbey Island	1.12
	Yakima Firing Center	1.18
West Virginia	State Average	0.95
	Bluefield	0.92
	Clarksburg	0.95
	Charleston	0.99
	Sugar Grove	1.15
Wisconsin	State Average	1.06
	LaCrosse	1.04
	Madison	1.02
	Milwaukee	1.13
	Badger AAP	1.06
	Clam Lake	1.20
	Fort McCoy	1.11
Wyoming	State Average	1.08
	Casper	1.07
	Cheyenne	1.10
	Laramie	1.08
	F.F. Warren AFB	1.10

Table 4.2 Outside the Continental U.S. (OCONUS) Area Cost Factor Indexes

OCONUS		ACF	Currency	
<u>State</u>	<u>Location</u>	<u>Index</u>	<u>Exchange</u>	<u>Remarks</u>
Australia	Australia Average	1.24	1.50	Australian Dollar/U.S. Dollar
	Sydney	1.08		
	Darwin	1.44		
	Perth	1.20		
Azores	Azores Average	1.20	158.00	Portuguese Escudo/U.S. Dollar
Belgium	Belgium Average	1.48	1.14	Belgium Franc/U.S. Dollar
Bermuda	Bermuda Average	1.31		
Canada	Canada Average	0.97	1.40	Canadian Dollar/U.S. Dollar
	Toronto	0.90		
	St. John's	1.06		
	Vancouver	0.94		
Caribbean	West Indies Average	1.16	2.40	Trin. & Tob Dollar/ U.S. Dollar
Crete	Crete Average	0.84	150.80	Drachma/U.S. Dollar
Cuba	Cuba Average	1.56		
Diego Garcia	Diego Garcia Average	2.57		
Egypt	Egypt Average	1.25	.75	Egyptian Pound/U.S. Dollar
Germany	Germany Average	1.17	2.46	Deutsche Mark/U.S. Dollar
Greece	Greece Average	0.81	150.80	Drachma/U.S. Dollar
	Athens	0.74		
	Inland	0.87		
Greenland	Greenland Average	2.75	8.97	Danish Kroner/U.S. Dollar
Guam	Guam Average	1.94		
Iceland	Iceland Average	2.55	111.00	Krona/U.S. Dollar
Italy	Italy Average	1.08	1678.00	Lira/U.S. Dollar
Japan	Japan Average	1.28	200.55	Yen/U.S. Dollar
	Tokyo	1.20		
	Misana	1.39		
	Okinawa	1.25		
Johnston Atoll	Johnston Atoll Average	2.28		
Korea	Korea Average	0.91	850.00	Won/U.S. Dollar
Kwajalein	Kwajalein Average	2.17		
Midway Island	Midway Is. Average	2.26		
Morocco	Morocco Average	1.18	12.50	Dirham/U.S. Dollar
Netherlands	Netherlands Average	1.21	2.77	Guilder/U.S. Dollar
New Zealand	New Zealand Average	1.54	2.10	New Zealand Dollar/ U.S. Dollar
Oman	Oman Average	1.21	.38	Rial Omani/U.S. Dollar
Panama	Panama Average	1.22		
Philippines	Philippines Average	0.88	18.00	Philippine Pesos/U.S. Dollar
Puerto Rico	Puerto Rico Average	1.05		
	San Juan	0.94		
	Inland	1.15		
Spain	Spain Average	0.98	154.00	Peseta/U.S. Dollar
Turkey	Turkey Average	0.68	569.65	Lira/U.S. Dollar
	Istanbul	0.60		
	Inland	0.76		
United Kingdom	United Kingdom Average	1.01	.69	British Pound/U.S. Dollar

**Table 4.3 Organizational Codes and Organization Descriptions
for Personal Computer Files**

00-Army

<u>0A-FORSCOM</u>	<u>Climate Zone</u>		<u>Climate Zone</u>
A1-Fort Bragg	3	BH-Fort Rucker	2
A2-Fort Campbell	5	BI-Fort Sill	3
A3-Fort Carson	8	BJ-Fort Leonard Wood	5
A4-Fort Devens	7	BK-Carlisle Bks	6
A5-Fort Drum	8		
A6-Fort Hood	2	<u>0C-USAISC</u>	
A7-Fort Indiantown Gap	6	C1-Fort Huachuca	4
A8-Fort Sam Houston	2	C2-Fort Ritchie	6
A9-Fort Lawton	8		
A0-Fort Lewis	8	<u>0D-AMC</u>	
AA-Fort McCoy	9	D1-Anniston AD	3
AB-Fort McPherson	3	D2-AMMR	7
AC-Fort Meade	6	D3-Harry Diamond Lab	6
AD-Fort Riley	6	D4-Letterkenny AD	6
AE-Fort Sheridan	7	D5-Lexington-BG AD	6
AF-Fort Stewart	2	D6-New Cumberland AD	6
AG-Fort Irwin	3	D7-Picatinny ARS	6
AH-Presidio of SF	5	D8-Pine Bluff ARS	3
AI-Vancouver Bks	9	D9-Red River ARS	2
AJ-Yakima Firing Ctr	7	D0-Redstone ARS	3
AK-Fort Greely		DA-Rock Island ARS	7
AL-Fort Richardson		DB-Rocky Mtn ARS	8
AM-Fort Wainwright		DC-Sacramento AD	4
AN-Petroleum Div		DD-Savanna AD	7
AO-Panama		DE-Seneca AD	8
AP-Fort Ord	5	DF-Sharpe AD	4
AQ-Fort Polk	2	DG-Sierra AD	7
		DH-Tobyhanna AD	7
<u>0B-TRADOC</u>		DI-Tooele AD	7
B1-Fort Belvoir	6	DJ-Watervliet ARS	8
B2-Fort Benning	3	DK-Corpus Christi AD	1
B3-Fort Bliss	3	DL-McAlester AAP	3
B4-Fort Chaffee	3	DM-Pueblo DA	7
B5-Fort Dix	6	DN-Fort Wingate DA	
B6-Fort Eustis	5	DO-Umatilla DA	5
B7-Fort Gordon	3	DP-Detroit ARS	8
B8-Fort Benjamin Harrison	6	DQ-Fort Monmouth	6
B9-Fort A.P. Hill	5	DR-Jefferson PG	6
BA-Fort Knox	5	DS-St. Louis Sup Ctr	5
BR-Fort Leavenworth	6	DT-Selfridge Sup Ctr	8
BC-Fort Lee	5	DU-Natick Dev Ctr	7
BD-Fort McClellan	3	DV-White Sands MR	3
BE-Fort Monroe	5	DW-Yuma PG	1
BF-Fort Hamilton	6	DX-Dugway	7
BG-Fort Pickett	5	DY-Aberdeen PG	6
		DZ-Dadger AAP	8

Table 4.3 (Cont'd)

<u>Climate Zone</u>			
P1-Cornhusker AAP	7	<u>OJ-USM</u>	<u>Climate Zone</u>
P2-Holston AAP	5	J1-USMA	7
P3-Indiana AAP	6		
P4-Iowa AAP	7	<u>OK-USAEUR</u>	
P5-Joliet AAP	7	K1-V Corps	11
P6-Kansas AAP	5	K2-VII Corps	11
P7-Lake City AAP	5	K3-21st Sup Cmd	11
P8-Lone Star AAP	2	K4-SETAF	11
P9-Longhorn AAP	2	K5-7th ATC	11
PO-Louisiana AAP	2	K6-HQ 26th Sup Cmd	11
PA-Milan AAP	3	K7-DEH Berlin	11
PB-Newport AAP	6		
PC-Radford AAP	5	<u>OL-USARJ</u>	
PD-Ravenna AAP	7	L1-HONSHU	
PE-Riverbank AAP	4	L2-Okinawa	
PF-Scranton AAP	7		
PG-Sunflower AAP	5	<u>OM-BMDSC</u>	
PH-Twin Cities AAP	9	M1-Kwajalein	
PI-Ethan Allen FR			
PJ-Volunteer AAP	3	<u>ON-KOREA</u>	
PK-Hawthorne AAP			
PL-Mainz AD	11	OO-WESTCOM	
PM-Lima AMC	7	O1-Westcom	
<u>0E-INSCOM</u>			
E1-Arlington Hall Stn	6		
E2-Vint Hill Farms	6		
<u>0F-HSC</u>			
F1-Ft. Detrick	6		
F2-Fitzsimmons Med Ctr	8		
F3-Walter Reed Med Ctr	6		
<u>0G-MDW</u>			
G1-MDW	6		
<u>0H-MTMC</u>			
H1-Bayonne MOT	6		
H2-Oakland AB	5		
H3-Sunny Point MOT	3		
H4-Gulf Outport	2		
<u>0I-COE</u>			
I1-COE			